HEXAGON TRANSPORTATION CONSULTANTS, INC.

2850 Stevens Creek Blvd Boutique Hotel

Traffic Impact Analysis

Prepared for:

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Executive Summary

This report presents the results of the traffic impact analysis conducted for the proposed development located at 2850 Stevens Creek Boulevard on the southeast corner of Stevens Creek Boulevard and Clover Avenue. The project site is located within a designated Urban Village (Valley Fair/Santana Row) per the Envision San Jose 2040 General Plan. Urban villages are walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the General Plan's environmental goals. The urban village strategy fosters:

- Mixed residential and employment activities that are attractive to an innovative workforce
- Revitalization of underutilized properties that have access to existing infrastructure
- Densities that support transit use, bicycling, and walking
- High-quality urban design

The proposed development would consist of the replacement of an existing gas station on the project site with a hotel with up to 200 rooms. Access to the project site will be provided via one full access driveway along Clover Avenue. A new four-level parking garage will be constructed as part of the project with one access point located at the end of the entrance drive aisle from Clover Avenue. On-site parking will include six handicap parking spaces on street level near the Clover Avenue entrance to the site and 169 spaces within the on-site parking structure.

Scope of Study

The purpose of the study is to identify the potential traffic impacts related to the proposed project. The potential impacts related to the proposed development were evaluated following the standards and methodologies set forth by the City of San Jose and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP).

The study includes an analysis of AM and PM peak-hour traffic conditions for 11 signalized and two unsignalized intersections within the City of San Jose. The study intersections were selected based upon the estimated number of project trips that are projected to be added through the intersections (10 or more trips per lane per hour). Any intersections outside of the study area to which the project would not add 10 or more trips per lane per hour, were not studied because the addition of project traffic would not be a sufficient amount to result in the degradation of intersection levels of service. The study also includes an operations analysis, based on vehicle-storage requirements at select intersections and an evaluation of the proposed site access and on-site circulation. An analysis of freeway segments was not performed because the proposed project would not add traffic equal to at least one percent of capacity of any freeway segment. However, per CMP guidelines, the traffic study includes an evaluation to document the determination that a freeway level of service analysis is not required.

Traffic conditions at all of the study intersections and freeway segments were analyzed for the weekday AM and PM peak hours. The weekday AM peak hour of traffic is generally between 7:00 and 9:00 AM and the weekday PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods that the most congested traffic conditions occur on a typical weekday.

Project Trip Generation

Hexagon has prepared project trip estimates for the proposed project based on trip generation rates obtained from the Institute of Transportation Engineers' (ITE), *Trip Generation*, 9th Edition, 2012.

Proposed Project Trip Generation

Based on the recommended ITE trip generation rates for hotel land uses, the proposed 200-room hotel would generate 1,634 daily vehicle trips, with 106 trips (63 inbound and 43 outbound) occurring during the AM peak hour and 120 trips (61 inbound and 59 outbound) occurring during the PM peak hour.

Existing Trip Generation

Trips associated with the existing uses on the project site are subtracted from the estimated trips to be generated by the proposed project. There is currently an 8-pump gas station on-site that will be replaced by the proposed project. The trips generated by the existing uses on site were obtained from new driveway counts completed in January 2016. Based on the driveway counts, the existing gas station generates 846 daily vehicle trips, with 46 trips (22 inbound and 24 outbound) occurring during the AM peak hour and 83 trips (39 inbound and 44 outbound) occurring during the PM peak hour.

Based on driveway counts and pass-by reductions, the existing site uses currently generate a total of 17 trips during the AM peak hour and 36 trips during the PM peak-hour based on the collected driveway counts.

In addition, trip generation for gas stations are typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that trips to gas stations are not actually generated by the gas stations, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections (although pass-by traffic is accounted for at the site entrances). ITE data show that gasoline/service stations with convenience markets have average pass-by trip reductions of 62% in the AM peak-hour and 56% in the PM peak-hour.

Based on the ITE trip generation rates and credit for existing use on the project site, it is estimated that the proposed project would generate an additional 1,313 daily trips, with 89 trips (55 inbound and 34 outbound) occurring during the AM peak hour and 84 trips (44 inbound and 40 outbound) occurring during the PM peak hour.

Background Plus Project Intersection Level of Service Analysis

Table ES-1 summarizes the results of the intersection level of service analysis under background plus project conditions. The results show that one intersection would be significantly impacted by the project, according to City of San Jose impact criteria. The impact and proposed improvements to mitigate the impact are described below.

(4) Monroe Street and Stevens Creek Boulevard (Protected Intersection)

Mitigation Measure. The intersection of Monroe Street and Stevens Creek Boulevard has been identified as a City of San Jose Protected Intersection. Thus, in lieu of physical mitigations at the Monroe Street and Stevens Creek Boulevard intersection, the project will construct offsetting improvements to other parts of the citywide transportation system to improve system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals and policies. The Protected Intersection policy is described in more detail below.

City of San Jose Protected Intersection Policy

The Monroe Street and Stevens Creek Boulevard intersection will be significantly impacted by the project and is identified as a City of San Jose Protected Intersection.

Protected Intersections consist of locations (there are a total of 29) that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect on other transportation facilities (such as pedestrian, bicycle, transit systems, etc.). Protected Intersections are, therefore, not required to maintain a Level of Service D, which is the City of San Jose standard. The deficiencies at all 29 Protected Intersections in the City of San Jose have been disclosed and overridden in previous EIRs.

If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided. The offsetting improvements are intended to provide other transportation benefits for the community adjacent to the traffic impact. The improvements may include enhancements to pedestrian, bicycle, and transit facilities, as well as neighborhood traffic calming measures and other roadway improvements.

The City will identify the specific offsetting improvements, which should be agreed upon by the community. Priority is given to improvements identified in previously adopted plans such as area-wide specific or master plans, redevelopment plans, or plans prepared through the Strong Neighborhoods Initiative. Community outreach should occur in conjunction with the project review and approval process. Once the specific improvements have been identified, the developer must submit improvement plans to the City of San Jose Department of Public Works for review and approval. The specific offsetting improvements proposed can be finalized during the subsequent planning permit stages and can be described in the Final EIR.

The Protected Intersection Policy has established a fee to fund the identified alternative transportation improvements. The fee as of July 1, 2015 is equal to $2,821 per net peak hour project trip for one intersection impact and $4,232 per net peak hour project trip for multiple intersection impacts. The base fee will automatically adjust annually on July 1st based on a 3.5 percent annual cost escalation. The 3.5 percent escalation cost is based on a 20-year average construction cost factor. For the purpose of determining the Protected Intersection LOS impact fee, net peak hour project trips are defined as the total number of peak hour trips generated by the project during the highest peak hour period after all appropriate trip credits have been applied. The value of the improvements should be equal to the established fees.

Freeway Segment Capacity

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent to any freeway segments in the area, freeway analysis for the CMP was not required.

Cumulative Intersection Level of Service Analysis

Table ES-1 summarizes the results of the intersection level of service analysis under cumulative conditions. The results show that, measured against the City of San Jose level of service impact criteria, the project's contribution in total volume from background traffic conditions to cumulative traffic conditions would be less than 25 percent at all of the intersections identified to be impacted by the total cumulative project trips. Therefore, the proposed project traffic will not result in a significant impact under cumulative conditions.

Other Transportation Issues

Site Access

A review of the project site plan was performed to determine if adequate site access and on-site circulation are provided and to identify any access or circulation issues that should be improved. This review is based on the site plan prepared by Jonathan Nehmer + Associates, Inc. dated May 6, 2016 presented on Figure 2 and in accordance with generally accepted traffic engineering standards.

The proposed project access will be taken exclusively by one entrance along Clover Avenue located at the southern perimeter of the project boundary. The entrances to the existing gas station on-site along Stevens Creek Boulevard as well as the driveway along Clover Avenue will be eliminated.

Four-levels of above-grade parking will be constructed as part of the project with one access point located at the end of the entrance drive aisle from Clover Avenue. On-site parking will include six handicap parking spaces on street level near the Clover Avenue entrance to the site and 169 spaces within the on-site parking structure. The site plan indicates that the garage access point will provide one inbound lane and one outbound lane.

The driveway on Clover Avenue is shown to be 20 feet wide. According to the City of San Jose municipal code, on-site drive aisles that serve two-way drive aisles should be 26 feet wide and driveway widths should match the 26 feet wide drive aisles. Therefore, the Clover Avenue driveway should be widened to 26 feet to meet city standards.

Truck Access

A delivery area is shown on the site plan between the garage and street level parking access points. The delivery area would be accessed via the entrance drive aisle from Clover Avenue.

Trash enclosures are shown to be located at the end of the entrance drive aisle from Clover Avenue. The drive aisle will require that garbage trucks enter the driveway and back out to Clover Avenue to exit. Garbage trucks also may utilize the on-site delivery area to turn-around for exit if it is not occupied.

The site plan also indicates a passenger loading zone along the project's frontage on Clover Avenue. Per City request, the passenger loading zone will be restricted to passenger drop-off/pick-up only and will not be used for truck loading. In addition, the passenger loading zone must be located such that a minimum 15 feet of red curb is provided at the existing fire hydrant along Clover Avenue or the fire hydrant must be relocated.

Overall, the site plan exhibits adequate site access for motor vehicles and large trucks. The City ultimately will determine the adequacy of the proposed driveways and internal on-site circulation design.

Intersection Operations

Redwood Avenue and Stevens Creek Boulevard

Westbound Left-Turn

The queuing analysis indicates that the maximum vehicle queue for the westbound left-turn pocket at the Redwood Avenue and Stevens Creek Boulevard intersection currently exceeds the existing vehicle storage capacity, and will continue to do so under background and background plus project conditions during PM peak hour. The addition of project traffic would lengthen the projected vehicle queue by no more than one vehicle during the PM peak hour.

The existing westbound left-turn pocket can be planned to provide the necessary 300 feet of storage by removing the existing median and trees along Stevens Creek Boulevard. The westbound left-turn pocket

at the Redwood Avenue and Stevens Creek Boulevard intersection will be modified along with the planned re-location of the intersection as part of the planned Valley Fair expansion.

Monroe Street and Stevens Creek Boulevard

Westbound Left-Turn

The queuing analysis indicates that the maximum vehicle queues for the westbound left-turn pockets at the Monroe Street and Stevens Creek Boulevard intersection would exceed the existing vehicle storage capacity under background and project conditions during the AM and PM peak hours. However, the addition of project traffic at the location would not cause the projected vehicle queues to increase beyond what is projected under background conditions. Therefore, the addition of project traffic would not result in the need to improve the intersection turn-pockets.

Northbound Left-Turn

The queuing analysis indicates that the maximum vehicle queue for the northbound left-turn pocket at the Monroe Street and Stevens Creek Boulevard intersection currently exceed the existing vehicle storage capacity and will continue to do so under background and background plus project conditions during PM peak hour. However, the addition of project traffic at the location would not cause the projected vehicle queues to increase beyond what is projected under background conditions. Therefore, the addition of project traffic would not result in the need to improve the intersection turn-pockets

Transit Services

The project site is not directly served by any transit services other than the limited stop 323 VTA bus line that has a stop at the intersection of Santana Row and Stevens Creek Boulevard approximately 900 feet west of the project site. Local bus line 60 operates along Winchester Boulevard. Bus stops for this line in the northbound and southbound directions are located near the Winchester Boulevard/Olin Avenue and Winchester Boulevard/Olsen Drive intersections, respectively. It can be assumed that some guests/employees of the proposed hotel would utilize the existing transit service. Applying an estimated three percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately three new transit riders during the AM peak hour and four during the PM peak hour. Assuming the existing transit service would remain unchanged with line 60 providing service with 15-20-minute headways during the peak commute periods at bus stops along Winchester Boulevard, the estimated number of new transit riders using the bus stops located near the project site would equate to no more than one new rider per bus during the peak hours. VTA operations reports indicate that the 60 bus line as well as several other bus lines in the project area serve less than ideal ridership. Therefore, the new riders due to the proposed project could be accommodated by the current available capacity of the bus service in the study area and improvement of the existing transit service would not be necessary with the project.

Bicycle and Pedestrian Facilities

Currently, there are no existing pedestrian/bike links between the project site and other existing pedestrian/bike and transit facilities in the area. The San Jose Bike Plan 2020 and Envision 2040 General Plan, as described below, identify planned improvements to the bicycle network within the City and provide policies and goals that are intended to promote and encourage the use of multi-modal travel options and reduce the identified project impacts to the roadway system. The planned improvements to the bicycle network will provide the project site with improved connections to surrounding pedestrian/bike and transit facilities and a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies.

Pedestrian traffic primarily would consist of guest and employees of the proposed hotel development walking to and from surrounding retail establishments, as well as bus stops on Stevens Creek Boulevard and Winchester Boulevard. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. All of the roadways in the vicinity of the project site have sidewalks on both sides of the street.

Public Transit/Pedestrian/Bike Improvements

The proposed project site is located within the Valley Fair/Santana Row Urban Village Boundary and fronts Stevens Creek Boulevard, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below:

- Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The planned improvements discussed below are intended to reduce the identified project impacts to the roadway system by providing the project site with viable connections to surrounding pedestrian/bike and transit facilities and provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements are beyond the means of the proposed project given that they may require right-of-way from adjacent properties. The project could be required to make a fair-share contribution towards the cost of the improvements since the identified improvements would be of benefit to the project.

Bicycle and Pedestrian Facility Improvements

The Envision 2040 General Plan identifies the following goals in regards to bicycling and pedestrians:

- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II Bike lanes are planned for:

- Monroe Street, between Newhall Street and Tisch Way
- Moorpark Avenue, between Williams Road and College Drive
- Winchester Boulevard, between Moorpark Avenue and Payne Avenue

- Tisch Way, between Winchester Boulevard and Monroe Avenue

Transit Facility Improvements

The Envision 2040 General Plan identifies the following goals in regards to public transit:

- Pursue development of BRT, bus, shuttle, and fixed guideway services on designated streets and connections to major destinations.
- Ensure that roadways designated as Grand Boulevards adequately accommodate transit vehicle circulation and transit stops. Prioritize bus mobility along Stevens Creek Boulevard.

Stevens Creek Boulevard has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. Given that the project fronts Stevens Creek Boulevard, the project shall be required to implement the following Grand Boulevard design principles:

- Provide a minimum 15 feet sidewalk width along its frontage on Stevens Creek Boulevard
- Minimize driveway cuts to minimize transit delay
- Provide enhanced shelters for transit services

There is a BRT line planned for the West San Carlos Street/Stevens Creek Boulevard corridor. The BRT will run on Stevens Creek Boulevard. Two BRT infrastructure solutions have been proposed: a single reversible transit-only lane between Winchester and MacArthur; and a dual-lane, transit-only overhead viaduct between Henry and MacArthur. The former option would include a center passing lane through the station loading areas, while the latter would include an aerial station.

The Stevens Creek Boulevard corridor serves as the primary access point to major retail/commercial destinations along Stevens Creek Boulevard and access to the area from the regional freeways of I-280 and I-880 is limited to their interchanges with Stevens Creek Boulevard. The proposed center lane BRT will require the removal of one travel lane in each direction of travel along a segment of Stevens Creek Boulevard between Winchester Boulevard and I-880 that is already congested. The removal of vehicular capacity along the primary travel corridor will result in a significant increase in congestion on the segment. Therefore, it is recommended that future BRT service along Stevens Creek Boulevard between Winchester Boulevard and I-880 be accommodated within the existing travel lanes.

The West San Carlos Street/Stevens Creek Boulevard BRT is in only the preliminary stages of its environmental review and there is no identified schedule for its completion.

Parking

Per the City of San Jose Municipal Code (Chapter 20.90.060) hotel land uses are required to provide one space per hotel room or suite plus one space per employee. Based on the City's parking requirements and an identified 15 hotel employees for the proposed 200-room hotel, the project is required to provide a total of 215 off-street parking spaces. The City of San Jose Urban Village Overlay parking reductions are applicable to the project site since the project site is located within the Valley Fair/Santana Row Urban Village. The Urban Village Overlay allows for a reduction in the required on-site parking by 20%. The application of the reduction would result in the requirement of 172 on-site parking spaces for the project.

The project proposes to provide a total of 175 on-site parking spaces. Therefore, adequate on-site parking will be provided per City parking requirements.

Bicycle Parking

For hotel land uses, the City's Bicycle Parking requirements require one bicycle parking space plus one space per 10 guest rooms. Based on the City's Bicycle Parking requirements, the proposed project is

required to provide 21 bicycle parking spaces to meet the city standards. The site plan indicates that the proposed project will include a bike room on street level adjacent to the garage entrance. The proposed bike room shall include a minimum of 21 bicycle parking spaces.

Effects on Surrounding Residential Streets

The proposed project site fronts the major Stevens Creek Boulevard thoroughfare. As proposed, direct access to the project site would be provided via one access point along Clover Avenue. It is anticipated that the majority of the project traffic would utilize the intersection of Clover Avenue with Stevens Creek Boulevard to access the project site. However, some project traffic could utilize Monroe Street and Hemlock Avenue. For this reason, an evaluation of the effects of project traffic along Clover Avenue and Hemlock Avenue was completed.

Unlike the intersection level of service analysis methodology, which has established impact thresholds, the analyses contained in this section are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Several studies have been made regarding the indirect impacts of traffic on residential neighborhoods. The variables affecting these impacts include traffic volumes, type, or makeup, of traffic (i.e. passenger cars, trucks, motorcycles, emergency vehicles, etc.), traffic speed, perception of through traffic as a percentage of total traffic, adequacy of street alignment (i.e., horizontal and vertical curvature), accident experience, on-street parking, residential dwelling setbacks from the street, pedestrian traffic, and street pavement conditions (which would add to traffic noise as the pavement deteriorates). Other factors that may be a contributor to neighborhood nuisance levels include socio-economic status of the neighborhood, and expectations of the residents regarding traffic volumes; however, these are beyond the purview of CEQA and are provided here for informational purposes only.

Estimated Project Traffic

The effects of project traffic on the each of the streets was evaluated based on field observations, the collection of traffic volume and speed data collected in January 2016, and projections of the additional project generated traffic.

The 24-hour tube counts indicate that the existing traffic volumes along Hemlock Avenue are approximately 940 daily vehicles and along Clover Avenue 620 daily vehicles. It is projected that the project would result in the addition of 417 daily trips to each of the streets. Although the projected average daily trips are within an acceptable range for this type of street, the added project trips constitute a measurable increase from the existing volumes. However, it is important to note that the proposed project is similar to surrounding land uses along both Clover and Hemlock Avenues. In addition, the proposed project traffic is not considered cut-through traffic given that each of the roadways serve as primary access roads to the project site.

Speed surveys also were conducted along Hemlock and Clover Avenues. The posted speed limit along both streets is 25 mph. Based on the collected data, the 85th percentile speed along both streets is within the 25 mph posted speed limits. Therefore, it can be concluded that there is not an obvious speeding issue along the either of the streets, and the posted speed limits are adequate.

Table ES 1
Intersection Level of Service Summary

Study Number	Intersection	Peak Hour	Count Date	Existing Avg. Delay	Existing LOS	Existing Plus Project Avg. Delay	Existing Plus Project LOS	Existing Plus Project Incr. In Crit. Delay	Existing Plus Project Incr. In Crit. V/C	Background Avg. Delay	Background LOS	Background Plus Project Avg. Delay	Background Plus Project LOS	Background Plus Project Incr. In Crit. Delay	Background Plus Project Incr. In Crit. V/C	Cumulative Avg. Delay	Cumulative LOS	Cumulative Incr. In Crit. Delay	Cumulative Incr. In Crit. V/C	% of Project Contribution
1	Winchester Boulevard and Stevens Creek Boulevard *	AM	10/21/15	35.2	D	35.3	D	0.1	0.002	36.4	D	36.4	D	0.1	0.001	40.7	D	14.2	0.232	
		PM	10/21/15	46.6	D	46.6	D	0.2	0.005	52.7	D	53.0	D	0.7	0.005	**89.8**	**F**	**98.8**	**0.333**	**2%**
2	Santana Row and Stevens Creek Boulevard	AM	10/21/15	13.7	B	13.7	B	0.0	0.001	12.9	B	12.9	B	0.0	0.001	12.9	B	0.8	0.096	
		PM	10/21/15	30.8	C	30.7	C	-0.1	0.002	30.8	C	30.7	C	-0.1	0.002	28.8	C	-1.9	0.088	
3	Redwood Avenue and Stevens Creek Boulevard	AM	10/21/15	7.5	A	7.7	A	0.0	0.001	19.6	B	20.1	C	0.0	0.001	19.1	B	-0.4	0.094	
		PM	10/21/15	23.0	C	23.5	C	1.2	0.015	48.0	D	48.6	D	1.8	0.015	51.7	D	10.9	0.100	
4	Monroe Street and Stevens Creek Boulevard	AM	10/21/15	29.8	C	29.9	C	0.0	0.005	36.4	D	36.6	D	0.1	0.005	43.0	D	7.2	0.120	
		PM	10/21/15	35.4	D	35.3	D	0.1	0.007	**90.5**	**F**	**92.0**	**F**	**2.5**	**0.007**	**159.1**	**F**	**99.1**	**0.238**	**6%**
5	I-880 SB Ramps and Stevens Creek Boulevard *	AM	10/21/15	24.7	C	24.7	C	0.1	0.007	25.5	C	25.6	C	0.1	0.007	28.2	C	4.4	0.162	
		PM	10/20/15	23.7	C	23.7	C	0.0	0.005	25.4	C	25.5	C	0.1	0.005	27.4	C	2.0	0.110	
6	I-880 NB Ramps and Stevens Creek Boulevard	AM	10/21/15	20.5	C	20.6	C	0.1	0.005	22.4	C	22.5	C	0.1	0.005	24.1	C	1.7	0.109	
		PM	10/20/15	22.8	C	22.9	C	0.1	0.004	24.9	C	25.0	C	0.1	0.004	25.8	C	1.3	0.058	
7	Winchester Boulevard and Olin Avenue	AM	10/20/15	18.6	B	18.5	B	-0.1	0.002	17.9	B	17.8	B	-0.1	0.002	21.2	C	7.4	0.207	
		PM	10/20/15	20.4	C	20.4	C	0.0	0.000	19.5	B	19.5	B	0.0	0.000	33.8	C	25.2	0.290	
8	Winchester Boulevard and Olsen Drive	AM	10/20/15	14.0	B	14.0	B	0.0	0.002	22.9	C	22.9	C	-0.1	0.002	26.6	C	5.3	0.073	
		PM	10/20/15	19.6	B	19.5	B	0.0	0.000	32.5	C	32.5	C	0.0	0.000	47.0	D	18.3	0.283	
9	Winchester Boulevard and I-280 WB on-ramp/Tisch Way	AM	10/20/15	25.6	C	25.8	C	0.3	0.004	32.7	C	33.0	C	0.5	0.004	**56.1**	**E**	**42.7**	**0.196**	**3%**
		PM	10/20/15	34.6	C	34.9	C	0.4	0.006	52.5	D	53.4	D	1.5	0.006	**74.7**	**E**	**28.6**	**0.101**	**3%**
10	Winchester Boulevard and Moorpark Avenue	AM	10/20/15	38.6	D	38.7	D	0.2	0.004	42.4	D	42.6	D	0.3	0.004	49.5	D	11.6	0.102	
		PM	10/20/15	42.1	D	42.2	D	0.0	0.000	43.5	D	43.5	D	0.0	0.000	43.9	D	0.7	0.017	
11	I-280 EB off-ramp and Moorpark Avenue *	AM	10/20/15	11.1	B	11.2	B	0.0	0.002	11.8	B	11.8	B	0.0	0.002	12.3	B	0.2	0.037	
		PM	10/20/15	12.9	B	12.9	B	0.0	0.002	13.5	B	13.5	B	0.0	0.002	13.7	B	0.1	0.019	

* Denotes CMP Intersection
Bold indicates unacceptable level of service.
Bold and boxed indicate significant impact.

1. Introduction

This report presents the results of the traffic impact analysis conducted for the proposed development located at 2850 Stevens Creek Boulevard on the southeast corner of Stevens Creek Boulevard and Clover Avenue. The project site is located within a designated Urban Village (Valley Fair/Santana Row) per the Envision San Jose 2040 General Plan. Urban villages are walkable, bicycle-friendly, transit-oriented, mixed-use settings that provide both housing and jobs, thus supporting the General Plan's environmental goals. The urban village strategy fosters:

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- Revitalization of underutilized properties that have access to existing infrastructure
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The proposed development would consist of the replacement of an existing gas station on the project site with a hotel with up to 200 rooms. Access to the project site will be provided via one full access driveway along Clover Avenue. A new four-level above-grade parking garage will be constructed as part of the project with one access point located at the end of the entrance drive aisle from Clover Avenue. On-site parking will include six handicap parking spaces on street level near the Clover Avenue entrance to the site and 169 spaces within the above-grade parking structure. The project site location and the surrounding study area are shown on Figure 1. The project site plan is shown on Figure 2.

Scope of Study

The purpose of the study is to identify the potential traffic impacts related to the proposed project. The potential impacts related to the proposed development were evaluated following the standards and methodologies set forth by the City of San Jose and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP).

The study includes an analysis of AM and PM peak-hour traffic conditions for 11 signalized and two unsignalized intersections within the City of San Jose. The study intersections were selected based upon the estimated number of project trips that are projected to be added through the intersections (10 or more trips per lane per hour). Any intersections outside of the study area to which the project would not add 10 or more trips per lane per hour, were not studied because the addition of project traffic would not be a sufficient amount to result in the degradation of intersection levels of service. The study also includes an operations analysis, based on vehicle-storage requirements at select intersections and an evaluation of the proposed site access and on-site circulation. An analysis of freeway segments was not performed because the proposed project would not add traffic equal to at least one percent of capacity of any freeway segment. However, per CMP guidelines, the traffic study includes an evaluation to document the determination that a freeway level of service analysis is not required.

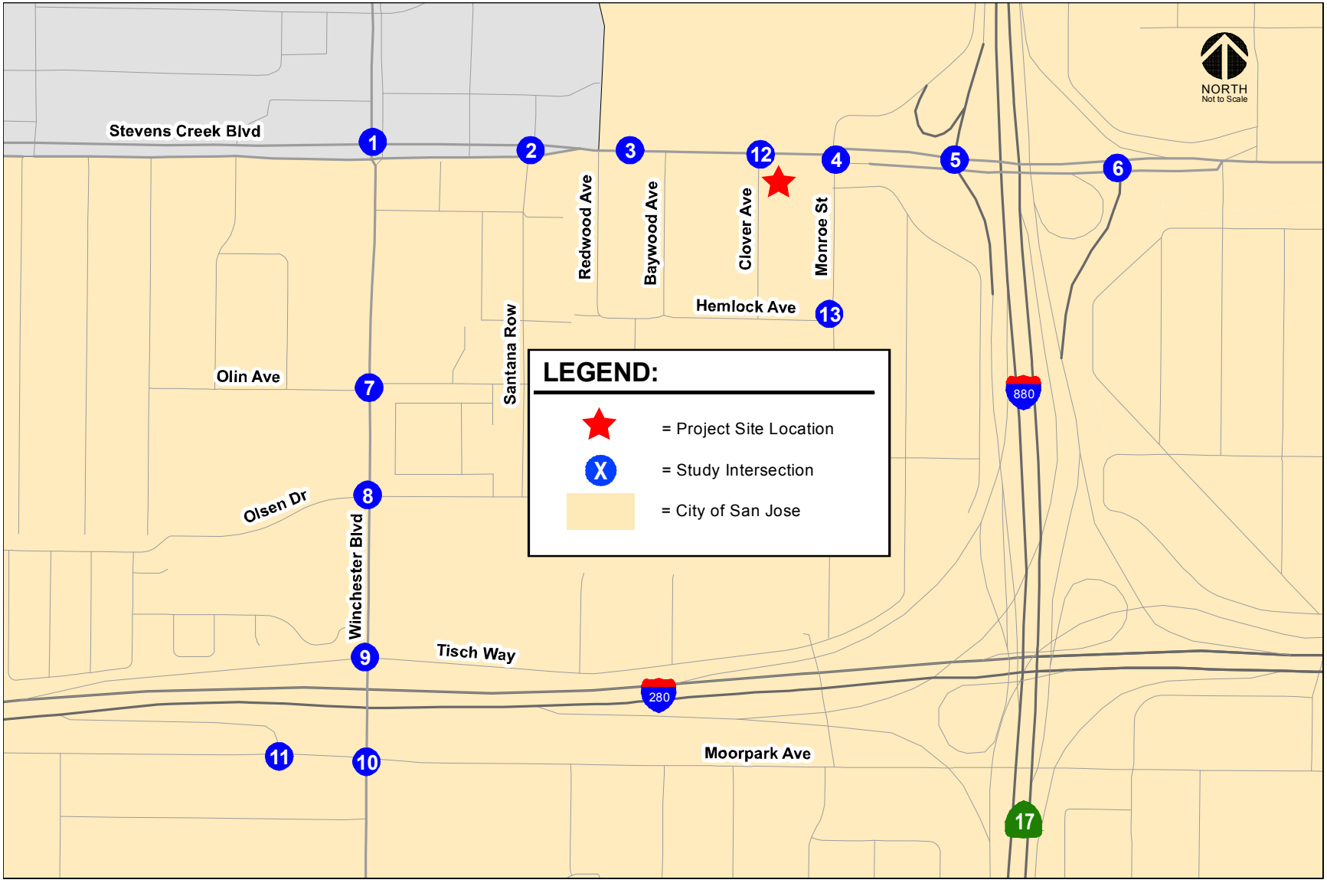

Figure 1
Site Location and Study Intersections

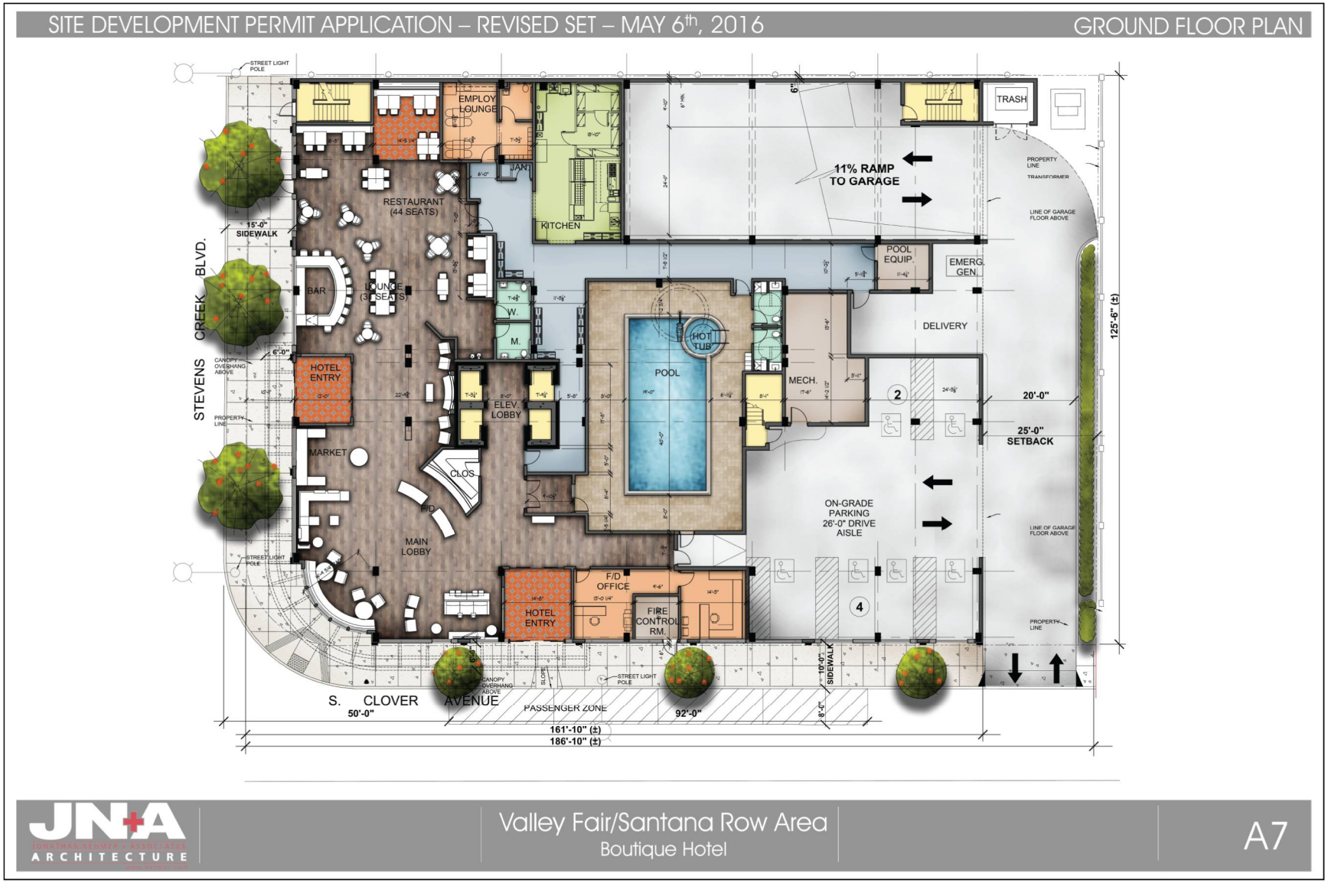

Figure 2
Site Plan

The study intersections are identified below.

Study Intersections

1. Winchester Boulevard and Stevens Creek Boulevard* (Protected Intersection)
2. Santana Row and Stevens Creek Boulevard
3. Redwood Avenue and Stevens Creek Boulevard
4. Monroe Street and Stevens Creek Boulevard (Protected Intersection)
5. I-880 SB Ramps and Stevens Creek Boulevard*
6. I-880 NB Ramps and Stevens Creek Boulevard
7. Winchester Boulevard and Olin Avenue
8. Winchester Boulevard and Olsen Drive
9. Winchester Boulevard and I-280 WB on-ramp/Tisch Way
10. Winchester Boulevard and Moorpark Avenue
11. I-280 EB off-ramp and Moorpark Avenue*
12. Clover Avenue and Stevens Creek Boulevard (unsignalized)
13. Monroe Street and Hemlock Avenue (unsignalized)

*Denotes CMP Intersection

Traffic conditions at all of the study intersections and freeway segments were analyzed for the weekday AM and PM peak hours. The weekday AM peak hour of traffic is generally between 7:00 and 9:00 AM and the weekday PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods that the most congested traffic conditions occur on a typical weekday. Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing AM and PM peak hour traffic volumes at all study intersections were obtained from new manual turning-movement counts conducted in October of 2015. The October 2015 counts were used in the analysis to reflect traffic conditions with the completion of the Stevens Creek Boulevard and I-880 interchange improvement project.

Scenario 2: *Existing Plus Project Conditions.* Existing plus project peak hour traffic volumes were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 3: *Background Conditions.* Background traffic volumes were estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI). Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining project impacts.

Scenario 4: *Background Plus Project Conditions.* Projected peak hour traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Scenario 5: *Cumulative Conditions.* Cumulative conditions represent future traffic volumes on the future transportation network. Cumulative conditions include traffic growth projected to occur due to the approved development projects, the proposed project, and other proposed but not yet approved (pending) development projects in the study area.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from previous traffic studies, new traffic counts, the City of San Jose, the 2014 CMP Annual Monitoring Report, and field observations. The following data were collected from these sources:

- existing traffic volumes
- lane configurations
- signal timing and phasing
- average speeds on freeway segments
- a list of approved and planned projects

Analysis Methodologies and Level of Service Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The analysis methods are described below.

Signalized Intersections

Signalized study intersections are subject to the local municipalities' level of service standards. The City of San Jose level of service methodology is TRAFFIX, which is based on the 2000 *Highway Capacity Manual* (HCM) method for signalized intersections. TRAFFIX evaluates signalized intersections operations on the basis of average delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersections level of service methodology, each of the Cities' methodologies employs the CMP defaults values for the analysis parameters. Each of the Cities' level of service standard for intersections is LOS D or better. The correlation between average delay and level of service is shown in Table 1.

City of San Jose Protected Intersection Policy

Winchester Boulevard & Stevens Creek Boulevard and Monroe Street & Stevens Creek Boulevard are identified as City of San Jose Protected Intersections.

Protected Intersections consist of locations (there are a total of 29) that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect on other transportation facilities (such as pedestrian, bicycle, transit systems, etc.). Protected Intersections are, therefore, not required to maintain a Level of Service D, which is the City of San Jose standard. The deficiencies at all 29 Protected Intersections in the City of San Jose have been disclosed and overridden in previous EIRs.

If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided. The offsetting improvements are intended to provide other transportation benefits for the community adjacent to the traffic impact. The improvements may include enhancements to pedestrian, bicycle, and transit facilities, as well as neighborhood traffic calming measures and other roadway improvements.

The City will identify the specific offsetting improvements, which should be agreed upon by the community. Priority is given to improvements identified in previously adopted plans such as area-wide specific or master plans, redevelopment plans, or plans prepared through the Strong Neighborhoods

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *Highway Capacity Manual 2000,(Washington, D.C., 2000)*

Initiative. Community outreach should occur in conjunction with the project review and approval process.

Once the specific improvements have been identified, the developer must submit improvement plans to the City of San Jose Department of Public Works for review and approval. The specific offsetting improvements proposed can be finalized during the subsequent planning permit stages and can be described in the Final EIR.

The Protected Intersection Policy has established a fee to fund the identified alternative transportation improvements. The fee as of July 1, 2015 is equal to $2,821 per net peak hour project trip for one intersection impact and $4,232 per net peak hour project trip for multiple intersection impacts. The base fee will automatically adjust annually on July 1st based on a 3.5 percent annual cost escalation. The 3.5 percent escalation cost is based on a 20-year average construction cost factor. For the purpose of determining the Protected Intersection LOS impact fee, net peak hour project trips are defined as the total number of peak hour trips generated by the project during the highest peak hour period after all appropriate trip credits have been applied. The value of the improvements should be equal to the established fees.

CMP Signalized Intersections

Since TRAFFIX is the designated level of service methodology for the CMP and the City of San Jose, the CMP study intersections are not analyzed separately, but rather are among the signalized intersections analyzed using TRAFFIX. The only difference between the City' and CMP analyses is that project impacts are determined on the basis of different level of service standards – the CMP level of service standard for signalized intersections is LOS E or better.

Report Organization

The remainder of this report is divided into seven chapters. Chapter 2 describes existing conditions in terms of the existing roadway network, transit service, and existing bicycle and pedestrian facilities. Chapter 3 describes the method used to estimate project traffic and the resulting traffic conditions expected under Existing plus Project conditions. Chapter 4 presents the intersection levels of service under background conditions with the addition of traffic from approved development projects. Chapter 5 presents traffic conditions and potential project impacts and recommended mitigation measures under background plus project conditions. Chapter 6 presents the traffic conditions in the study area under cumulative conditions with the addition of traffic from development projects that are not yet approved. Chapter 7 presents the analysis of other transportation related issues, including site access and on-site circulation, and parking. Chapter 8 presents the conclusions of the traffic impact analysis.

2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities. Also included are the existing levels of service of the key intersections and freeway segments in the study area.

Existing Roadway Network

Regional access to the project site is provided via I-880 and I-280. These facilities are described below.

I-880 is a six-lane freeway in the vicinity of the site. It extends north to Oakland and south to I-280 in San Jose, at which point it makes a transition into SR 17 to Santa Cruz. Access to the site is provided via its interchange with Stevens Creek Boulevard.

I-280 is an eight-lane freeway in the vicinity of the site. It extends northwest to San Francisco and east to King Road in San Jose, at which point it makes a transition into I-680 to Oakland. Access to and from northbound I-280 to the site is provided via its interchange with Winchester Boulevard.

Local access to the site is provided by Stevens Creek Boulevard, Winchester Boulevard, Tisch Way, Monroe Street, Hemlock Avenue, and Clover Avenue. These roadways are described below.

Stevens Creek Boulevard is a divided six-lane east-west roadway in the vicinity of the project site. It extends from Cupertino eastward to I-880, at which point it makes a transition into San Carlos Street to Downtown San Jose. Access to the site from Stevens Creek Boulevard is provided via its intersection with Clover Avenue.

Winchester Boulevard is a divided six-lane north-south roadway that runs from Los Gatos to Lincoln Street in Santa Clara. Winchester Boulevard provides access to the project site via its intersection with Stevens Creek Boulevard.

Tisch Way is a two-lane east-west roadway that extends eastward from Winchester Boulevard to South Monroe Street.

Monroe Street is a two-lane north-south roadway that extends northward from Tisch Way to Stevens Creek Boulevard. Access to the project site from Monroe Street is provided via its intersection with Hemlock Avenue.

Hemlock Avenue is a two-lane east-west roadway that begins at Monroe Street and extends westward just past Clover Avenue, where it terminates. Access to the project site from Hemlock Avenue is provided via its intersection with Clover Avenue.

Clover Avenue is a two-lane north-south roadway that runs between Hemlock Avenue and Stevens Creek Boulevard. Clover Avenue provides direct access to the project site via a full-access driveway.

Existing Bicycle and Pedestrian Facilities

There are no city designated bike lanes in the vicinity of the project site. However, some roadways that do not provide designated bike lanes are identified bike routes.

Pedestrian facilities in the project area consist primarily of sidewalks along all surroundings streets. Sidewalks are found along virtually all previously described local roadways in the study area and along the local residential streets and collectors near the site. At South Monroe Street and Tisch Way, there is a pedestrian footbridge over I-280 connecting South Monroe Street/Tisch Way and Moorpark Avenue.

Existing Transit Service

Existing transit service to the study area is provided by the VTA. The VTA bus service is described below and shown on Figure 3.

VTA Bus Service

The Valley Fair Transit Center is located at Valley Fair shopping mall, along Forest Avenue, within ¾ of a mile of the project site. The Valley Fair Transit Center is served by two bus lines (lines 23 and 60). The 23 line provides service between DeAnza College and the Alum Rock Transit Center via Stevens Creek Boulevard, with 10-15-minute headways during commute hours. The 60 line provides service between the Winchester Transit Center and Great America via Winchester Boulevard, with 15-20-minute headways during commute hours. The nearest bus stop locations to the project site are located at the Olin Avenue and Olsen Drive intersections with Winchester Boulevard and are served by the 60 line. Other bus lines in the vicinity of the project site include the 25 line that provides service between the Alum Rock Transit Center and De Anza College, with 10-20-minute headways during commute hours. Limited Stop Express Route 323 operates along Stevens Creek Boulevard with the nearest stop located at the intersection of Santana Row and Stevens Creek Boulevard.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 4.

Existing Traffic Volumes

Existing peak hour traffic volumes at all study intersections were obtained from new manual turning-movement counts conducted in October of 2015. The October 2015 counts were used in the analysis to reflect traffic conditions with the completion of the Stevens Creek Boulevard and I-880 interchange improvement project. The existing peak-hour intersection volumes are shown on Figure 5. Intersection turning-movement counts conducted for this analysis are presented in Appendix A. Peak hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix C.

Existing Intersection Levels of Service

The results of the intersection level of service analysis under existing conditions are summarized in Table 2. The results show that, measured against the City of San Jose level of service standard, all of the study intersections currently operate at acceptable levels during both of the AM and PM peak hours. The level of service calculation sheets are included in Appendix D.

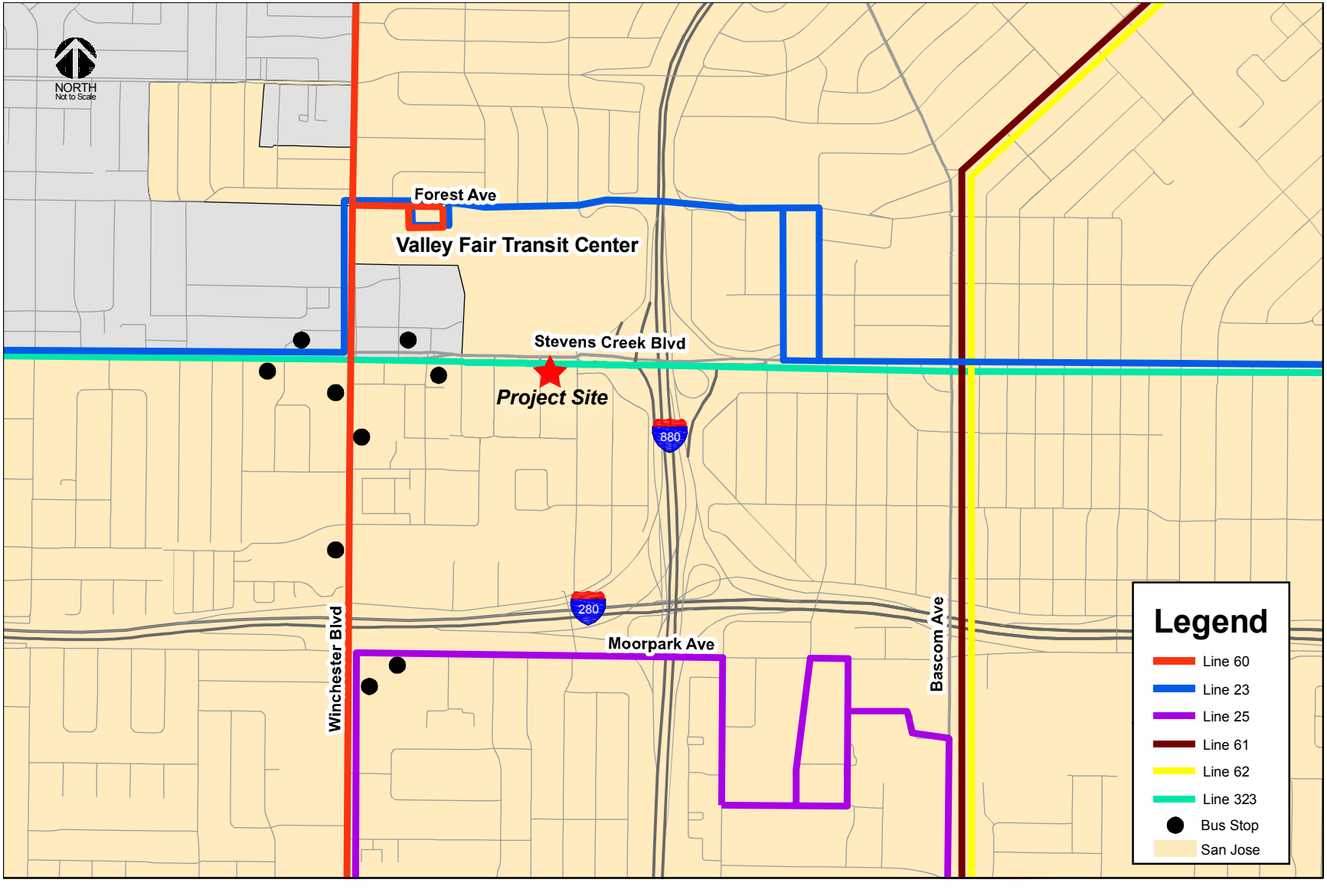

Figure 3
Existing Transit Services

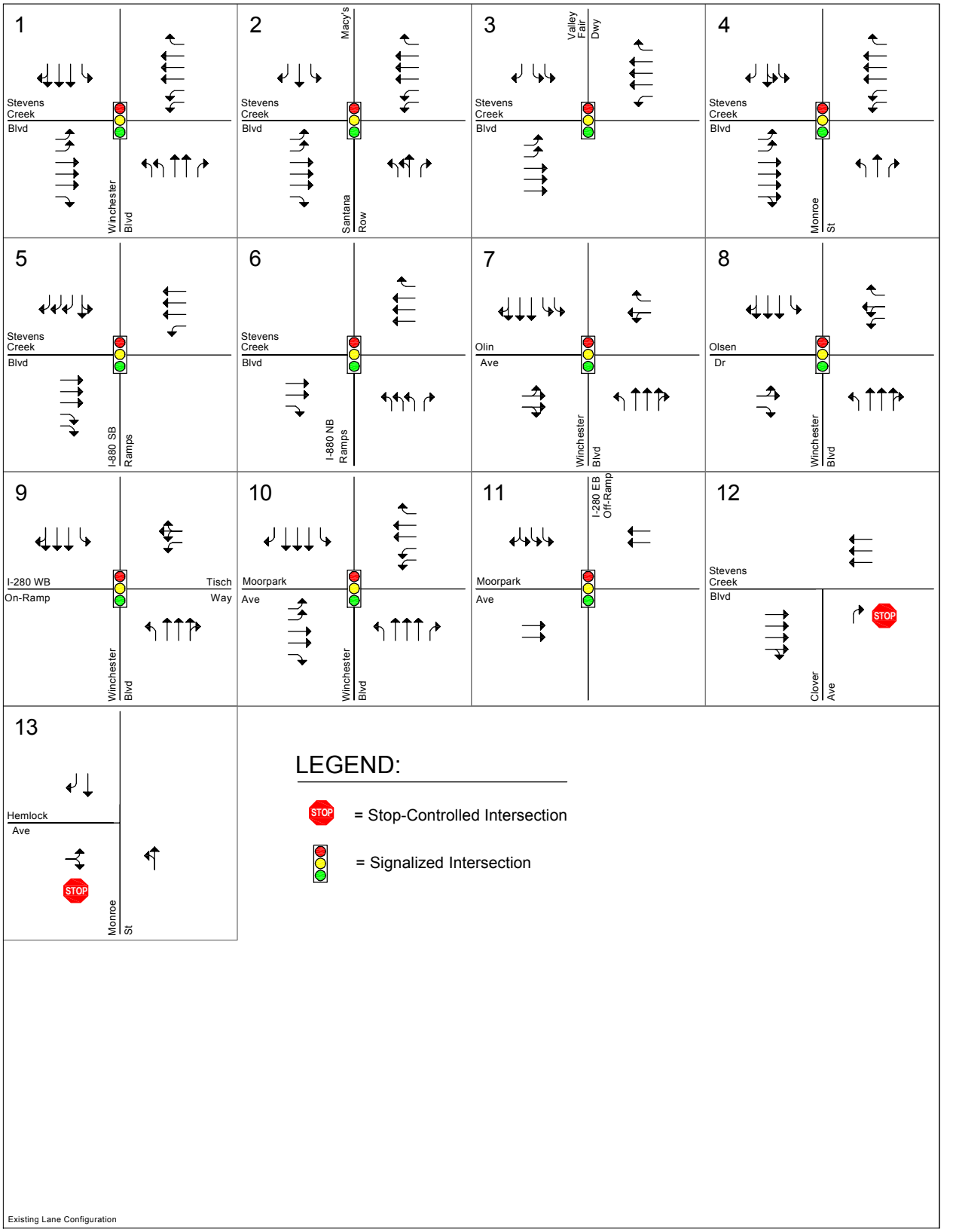

Figure 4
Existing Lane Configurations

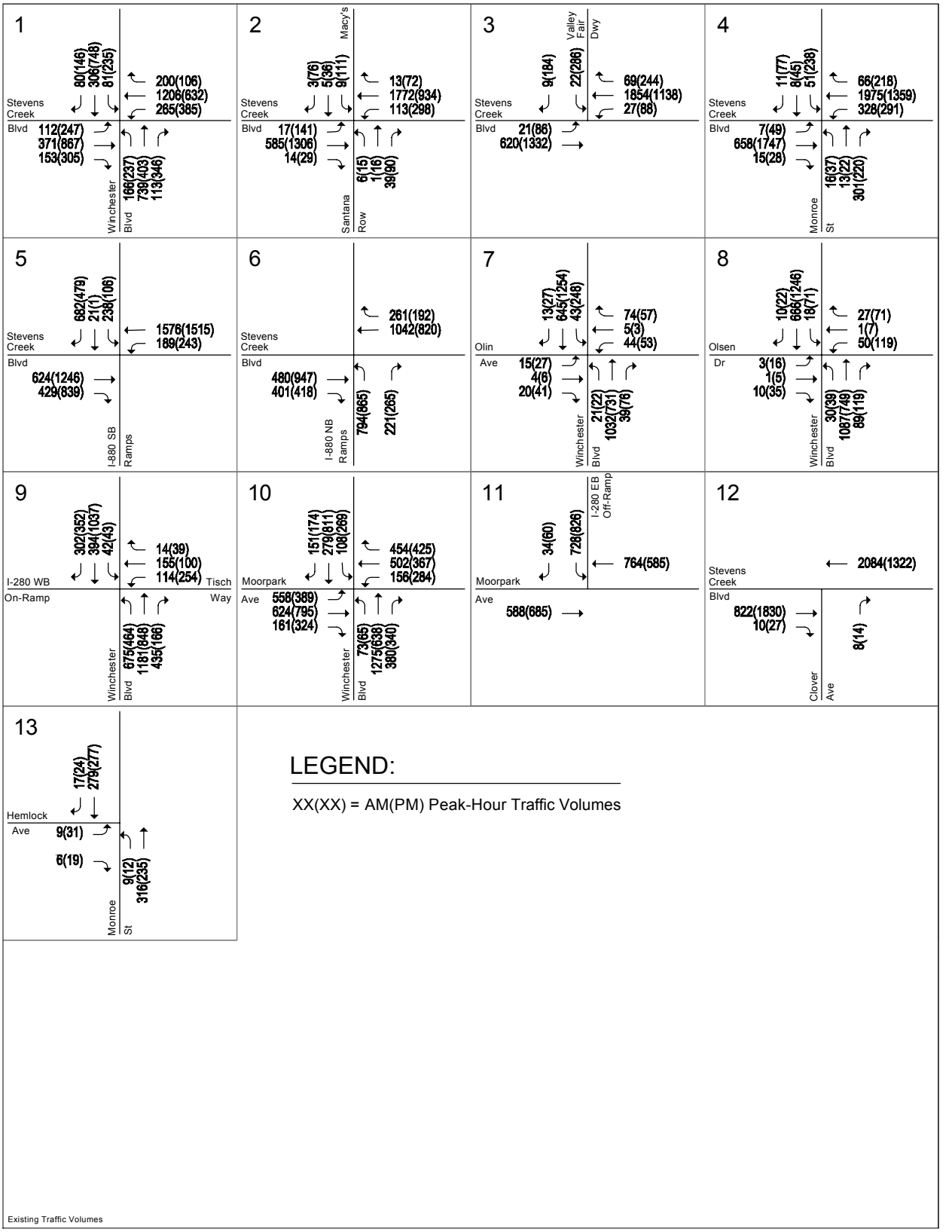

Figure 5
Existing Traffic Volumes

Table 2
Existing Intersection Levels of Service

Study Number	Intersection	Peak Hour	Count Date	Avg. Delay	LOS
1	Winchester Boulevard and Stevens Creek Boulevard *	AM	10/21/15	35.2	D
		PM	10/21/15	46.6	D
2	Santana Row and Stevens Creek Boulevard	AM	10/21/15	13.7	B
		PM	10/21/15	30.8	C
3	Redwood Avenue and Stevens Creek Boulevard	AM	10/21/15	7.5	A
		PM	10/21/15	23.0	C
4	Monroe Street and Stevens Creek Boulevard	AM	10/21/15	29.8	C
		PM	10/21/15	35.4	D
5	I-880 SB Ramps and Stevens Creek Boulevard *	AM	10/21/15	24.7	C
		PM	10/20/15	23.7	C
6	I-880 NB Ramps and Stevens Creek Boulevard	AM	10/21/15	20.5	C
		PM	10/20/15	22.8	C
7	Winchester Boulevard and Olin Avenue	AM	10/20/15	18.6	B
		PM	10/20/15	20.4	C
8	Winchester Boulevard and Olsen Drive	AM	10/20/15	14.0	B
		PM	10/20/15	19.6	B
9	Winchester Boulevard and I-280 WB on-ramp/Tisch Way	AM	10/20/15	25.6	C
		PM	10/20/15	34.6	C
10	Winchester Boulevard and Moorpark Avenue	AM	10/20/15	38.6	D
		PM	10/20/15	42.1	D
11	I-280 EB off-ramp and Moorpark Avenue *	AM	10/20/15	11.1	B
		PM	10/20/15	12.9	B

* Denotes CMP Intersection

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field.

Field observations revealed the following operational problems that may not be reflected in level of service calculations:

In general, Stevens Creek Boulevard experiences heavy congestion during the weekday PM peak hour in both directions of travel between Winchester Boulevard and I-880. The congestion is made worse by the close spacing of several signalized intersections along the roadway. At its intersections with I-880 and Monroe Street, vehicles do not clear at nearly every approach during the PM peak hour. Left-turn queues in the westbound direction regularly extend out of the provided turn-pockets at its intersections with Winchester Boulevard and Santana Row during the PM peak hour. Vehicles making the westbound left-turn movement at Santana Row do not clear within the allotted green time. Left-turn pockets in the eastbound direction are adequate with no vehicles spilling out of the provided storage.

The right lane on eastbound Stevens Creek Boulevard is sometimes congested from I-880 to Santana Row with vehicles accessing the southbound I-880 or I-280 on-ramps. Consequently, some vehicles aggressively enter the right lane at the last minute to avoid the long wait.

All other study intersections operate without any major operational problems.

Operations along Stevens Creek Boulevard will be improved with the implementation of several improvements along Stevens Creek Boulevard that are approved and scheduled for completion as part of the approved expansion of the Valley Fair Shopping Center. The planned improvements include:

Santana Row and Stevens Creek Boulevard – Restrping to provide one left-turn lane, one through lane, and one right-turn lane on the north and south approaches. The north and south approaches will be converted from split to protected phasing.

Redwood and Stevens Creek Boulevard – This intersection will be relocated from its current position to align with Baywood Avenue. The north approach at the relocated intersection will serve as the primary access point to Valley Fair. The north approach will be restriped to provide one left-turn lane and one shared left and right-turn lane.

Winchester Boulevard and Stevens Creek Boulevard – The planned improvement consists of addition of a second southbound left-turn lane at the intersection.

Improvements to the intersections near the Monroe Street and I-880 intersections are physically restricted. Capacity enhancing improvements at the Stevens Creek Boulevard and I-880 interchange have recently been completed.

3. Existing Plus Project Conditions

This chapter describes existing traffic conditions with the addition of the traffic that would be generated by the proposed project. Existing plus project traffic conditions could potentially exist if the project was constructed and occupied prior to the other approved projects in the area. It is unlikely that this traffic condition would occur, since other approved projects expected to add traffic to the study area would likely be built and occupied during the time the project is going through the development review and construction process. This scenario describes a less congested traffic condition, since it ignores any potential traffic from prior approvals. Existing plus project conditions also does not include any planned and funded roadway improvements that have not been constructed.

Transportation Network Under Existing Plus Project Conditions

It is assumed in this analysis that the transportation network under existing plus project conditions would be the same as the existing transportation network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. Project trip estimates are based on trip generation rates obtained from the Institute of Transportation Engineers' (ITE's) *Trip Generation*, Ninth Edition, 2012.

Proposed Project Trip Generation

Based on the recommended ITE trip generation rates for hotel land uses, the proposed 200-room hotel would generate 1,634 daily vehicle trips, with 106 trips (63 inbound and 43 outbound) occurring during the AM peak hour and 120 trips (61 inbound and 59 outbound) occurring during the PM peak hour.

Existing Trip Generation

Trips associated with the existing uses on the project site are subtracted from the estimated trips to be generated by the proposed project. There is currently an 8-pump gas station on-site that will be replaced by the proposed project. The trips generated by the existing uses on site were obtained from new driveway counts completed in January 2016. Based on the driveway counts, the existing gas station generates 846 daily vehicle trips, with 46 trips (22 inbound and 24 outbound) occurring during the AM peak hour and 83 trips (39 inbound and 44 outbound) occurring during the PM peak hour.

Based on driveway counts and pass-by reductions, the existing site uses currently generate a total of 17 trips during the AM peak hour and 36 trips during the PM peak-hour based on the collected driveway counts.

In addition, trip generation for gas stations are typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that trips to gas stations are not actually generated by the gas stations, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections (although pass-by traffic is accounted for at the site entrances). ITE data show that gasoline/service stations with convenience markets have average pass-by trip reductions of 62% in the AM peak-hour and 56% in the PM peak-hour.

Based on the ITE trip generation rates and credit for existing use on the project site, it is estimated that the proposed project would generate an additional 1,313 daily trips, with 89 trips (55 inbound and 34 outbound) occurring during the AM peak hour and 84 trips (44 inbound and 40 outbound) occurring during the PM peak hour. The trip generation estimates for proposed project are presented in Table 3.

Trip Distribution and Assignment

The trip distribution pattern for the proposed project was estimated based on traffic patterns on the surrounding roadway system and on the locations of complementary land uses. The project trip distribution pattern is shown graphically on Figure 6.

The peak-hour trips associated with the proposed project were added to the transportation network in accordance with the distribution pattern discussed above. Figure 7 shows the assignment of net project traffic on the local transportation network. A tabular summary of project traffic at each study intersection is contained in Appendix C.

Existing Plus Project Traffic Volumes

Project trips, as represented in the project trip assignment discussed above, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 8. Traffic volumes for all components of traffic are tabulated in Appendix C.

Existing Plus Project Intersection Analysis

The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 4. The results show that, measured against the City of San Jose level of service standard, all of the study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic. The level of service calculation sheets are included in Appendix D.

Table 3
Trip Generation Estimates

Land Use Designation	ITE Land Use Code	Size	Daily		AM Peak Hour						PM Peak Hour					
					Pk-Hr	Splits		Trips			Pk-Hr	Splits		Trips		
			Rate[1]	Trips	Rate[1]	In	Out	In	Out	Total	Rate[1]	In	Out	In	Out	Total
Proposed Land Use																
Hotel	310	200 rooms	8.17	1,634	0.53	59%	41%	63	43	106	0.60	51%	49%	61	59	120
Existing Land Use																
Gasoline Service Station[2]	--	8 pumps	105.75	846	5.75	48%	52%	22	24	46	10.38	47%	53%	39	44	83
pass-by reduction[3]				-525				-14	-15	-29				-22	-25	-47
Existing trips after pass-by reduction				321				8	9	17				17	19	36
Net Project Trips (Proposed - Existing Land Uses)				**1,313**				**55**	**34**	**89**				**44**	**40**	**84**

Source: ITE Trip Generation, 9th Edition, 2012.
ITE Land Use 310 - Hotel

[1]The average trip generation rate from the ITE Trip Generation Manual was used for the proposed hotel.

[2]Trips for the existing gas station were obtained from driveway counts conducted January 21, 2016

[3]ITE data show that gasoline/service stations with convenience markets have average pass-by trip reductions of 62% in the AM peak-hour and 56% in the PM peak-hour. To be conservative, the daily pass-by reduction was assumed to same as the AM peak-hour.

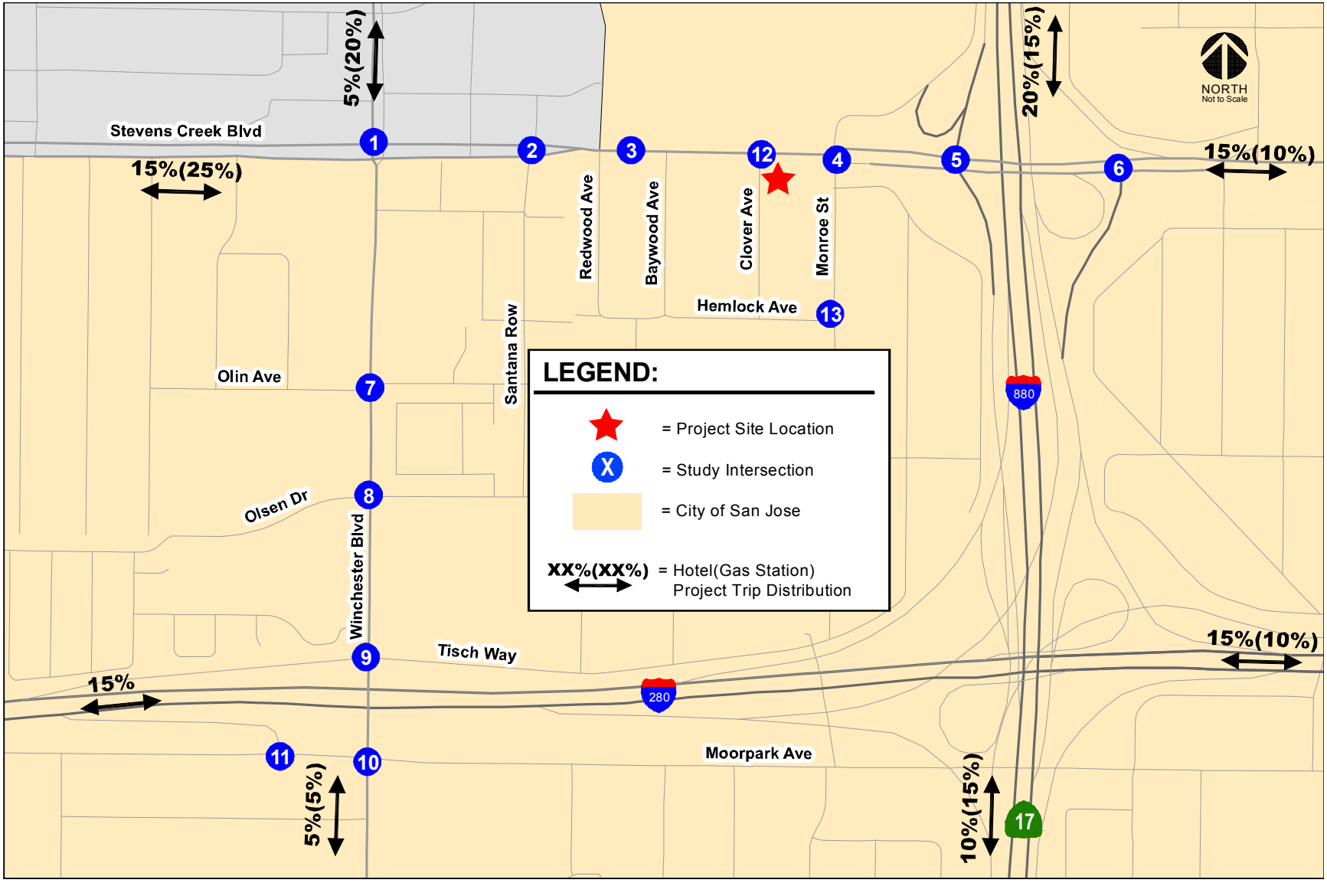

Figure 6
Project Trip Distribution

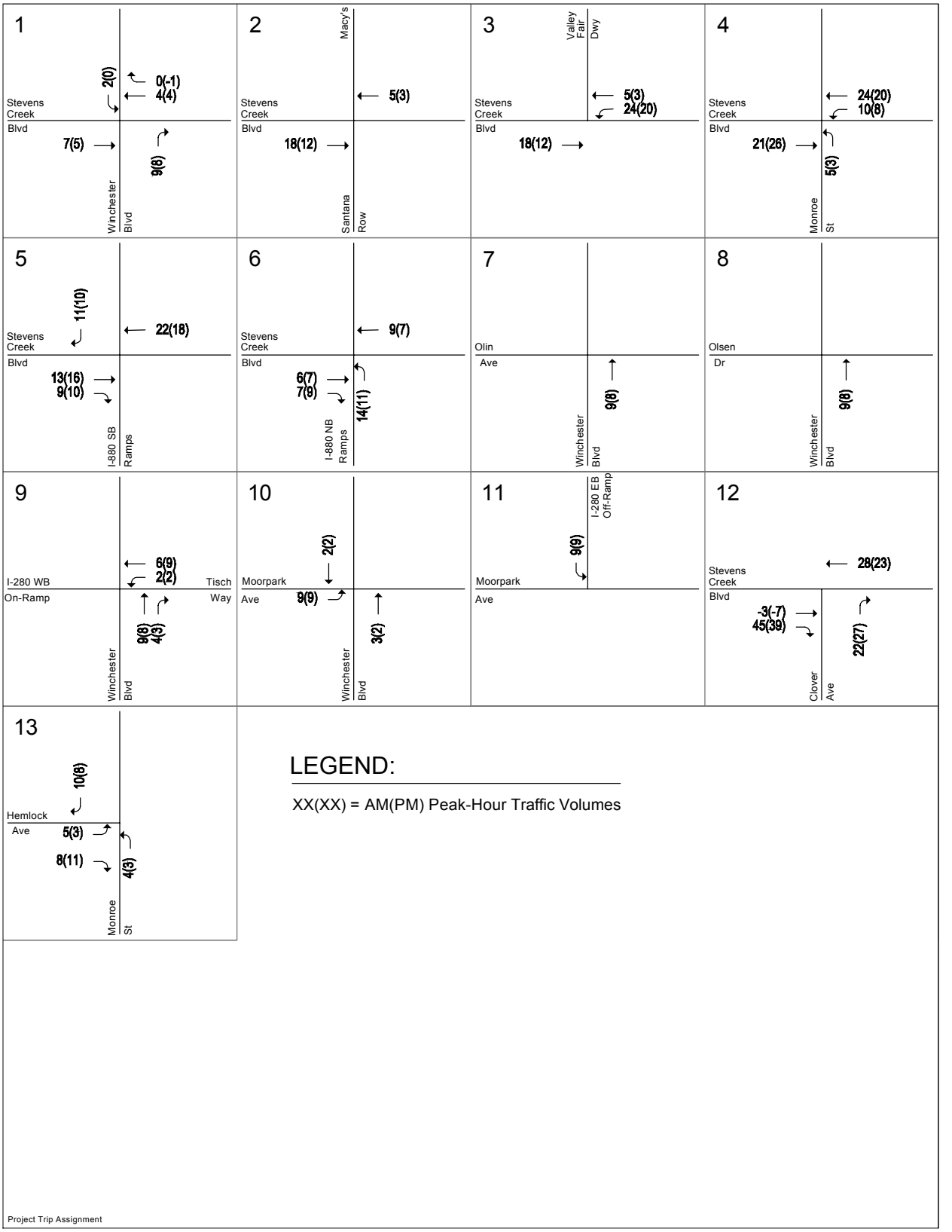

Figure 7
Net Project Trip Assignment

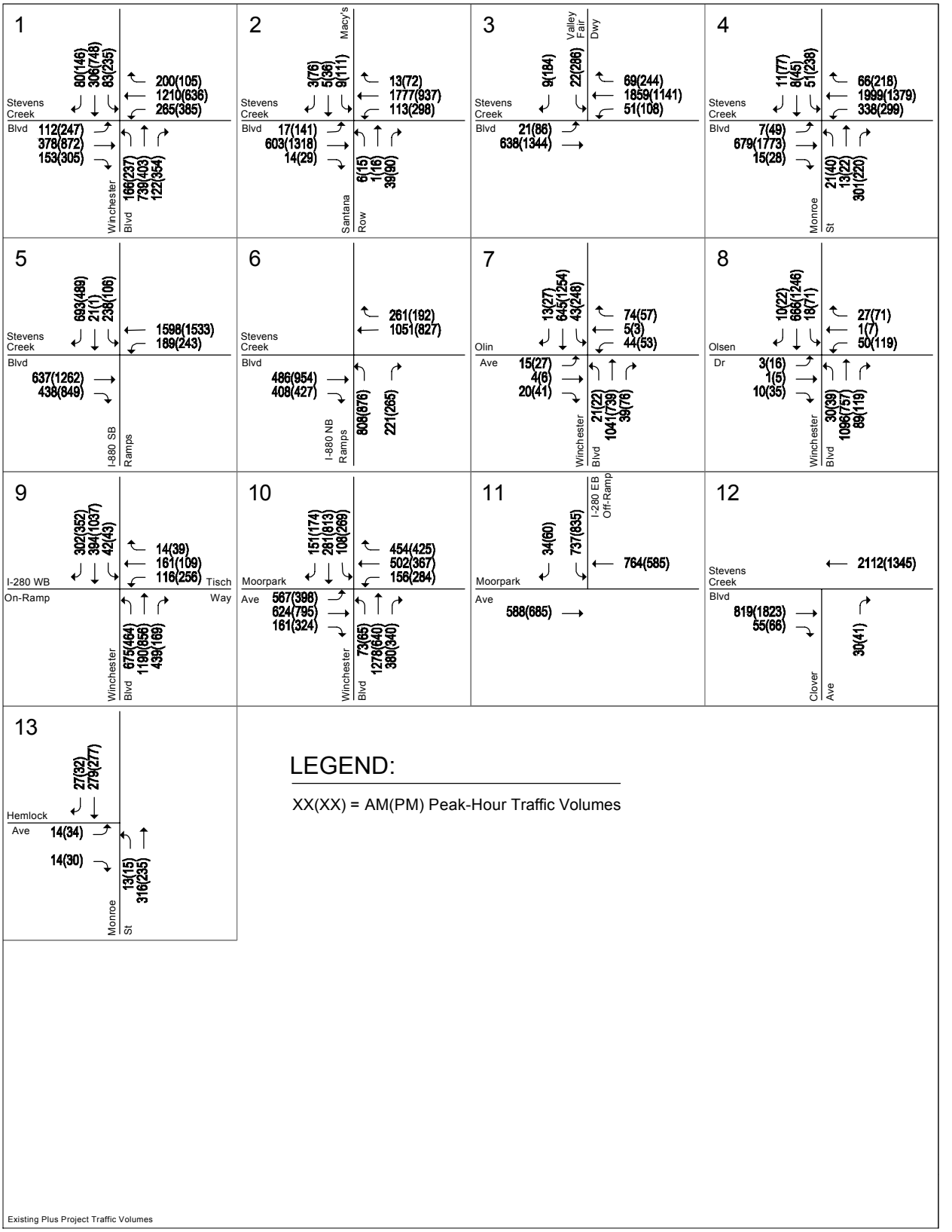

Figure 8
Existing Plus Project Traffic Volumes

Table 4
Existing Plus Project Intersection Levels of Service

Study Number	Intersection	Peak Hour	Existing Avg. Delay	Existing LOS	Existing Plus Project Avg. Delay	Existing Plus Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	Winchester Boulevard and Stevens Creek Boulevard *	AM	35.2	D	35.3	D	0.1	0.002
		PM	46.6	D	46.6	D	0.2	0.005
2	Santana Row and Stevens Creek Boulevard	AM	13.7	B	13.7	B	0.0	0.001
		PM	30.8	C	30.7	C	-0.1	0.002
3	Redwood Avenue and Stevens Creek Boulevard	AM	7.5	A	7.7	A	0.0	0.001
		PM	23.0	C	23.5	C	1.2	0.015
4	Monroe Street and Stevens Creek Boulevard	AM	29.8	C	29.9	C	0.0	0.005
		PM	35.4	D	35.3	D	0.1	0.007
5	I-880 SB Ramps and Stevens Creek Boulevard *	AM	24.7	C	24.7	C	0.1	0.007
		PM	23.7	C	23.7	C	0.0	0.005
6	I-880 NB Ramps and Stevens Creek Boulevard	AM	20.5	C	20.6	C	0.1	0.005
		PM	22.8	C	22.9	C	0.1	0.004
7	Winchester Boulevard and Olin Avenue	AM	18.6	B	18.5	B	-0.1	0.002
		PM	20.4	C	20.4	C	0.0	0.000
8	Winchester Boulevard and Olsen Drive	AM	14.0	B	14.0	B	0.0	0.002
		PM	19.6	B	19.5	B	0.0	0.000
9	Winchester Boulevard and I-280 WB on-ramp/Tisch Way	AM	25.6	C	25.8	C	0.3	0.004
		PM	34.6	C	34.9	C	0.4	0.006
10	Winchester Boulevard and Moorpark Avenue	AM	38.6	D	38.7	D	0.2	0.004
		PM	42.1	D	42.2	D	0.0	0.000
11	I-280 EB off-ramp and Moorpark Avenue *	AM	11.1	B	11.2	B	0.0	0.002
		PM	12.9	B	12.9	B	0.0	0.002

* Denotes CMP Intersection

4. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. It describes the planned transportation system, the procedure used to determine background traffic volumes, and the resulting traffic conditions. The background scenario predicts a realistic traffic condition that would occur as approved development gets built and occupied.

Background Transportation Network

It is assumed in this analysis that the transportation network under background conditions would be the same as the existing transportation network with the exception of the following improvements:

Winchester Boulevard and Stevens Creek Boulevard – The planned improvement consists of addition of a second southbound left-turn lane at the intersection. The second southbound left-turn lane is to be completed with the approved expansion of the Valley Fair Shopping Center. The traffic associated with the Valley Fair expansion is included within the background volumes described below. It should be noted that the intersection of Winchester Boulevard and Stevens Creek Boulevard has been identified as a Protected Intersection. The LOS policy specifies that Protected Intersections consist of locations that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect upon other transportation facilities (such as pedestrian, bicycle, and transit systems). The policy acknowledges that exceptions to the City's LOS policy of maintaining a Level of Service D at local intersections will be made for certain Protected Intersections that have been built to their planned maximum capacity.

Santana Row and Stevens Creek Boulevard – As part of the approved expansion of the Valley Fair Shopping Center, this intersection will be restriped to provide one left-turn lane, one through lane, and one right-turn lane on the north and south approaches. The north and south approaches will be converted from split to protected phasing.

Redwood and Stevens Creek Boulevard – As part of the approved expansion of the Valley Fair Shopping Center, this intersection will be relocated from its current position to align with Baywood Avenue. The north approach at the relocated intersection will serve as the primary access point to Valley Fair. The north approach will be restriped to provide one left-turn lane and one shared left and right-turn lane.

Winchester Boulevard and Olsen Drive – As part of the Santana Row Lot 11 construction currently in progress, Olsen Drive, east of Winchester Boulevard, is narrowed temporarily from two lanes to one lane in the eastbound direction. The temporary narrowing includes the closure of one of the two southbound left-turn lanes and conversion of the shared eastbound through and right-turn lane to an exclusive right-turn lane. Under background conditions, Santana Row Lot 11 is assumed to be completed and the lane geometries would be reverted back to those that were in place before the construction.

Background Traffic Volumes

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City of San Jose's Approved Trips Inventory (ATI) database included in Appendix B. The background traffic scenario predicts a realistic traffic condition that would occur as approved development is built. Background traffic volumes are shown Figure 9. The approved trips and traffic volumes for all components of traffic are tabulated in Appendix C.

Intersection Levels of Service Under Background Conditions

The results of the intersection level of service analysis under background conditions are summarized in Table 5. The results show that, measured against the City of San Jose level of service standard, the intersection of Monroe Street and Stevens Creek Boulevard is projected to operate at unacceptable LOS F during the PM peak hour.

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic when measured against the City of San Jose level of service standards. The intersection level of service calculation sheets are included in Appendix D.

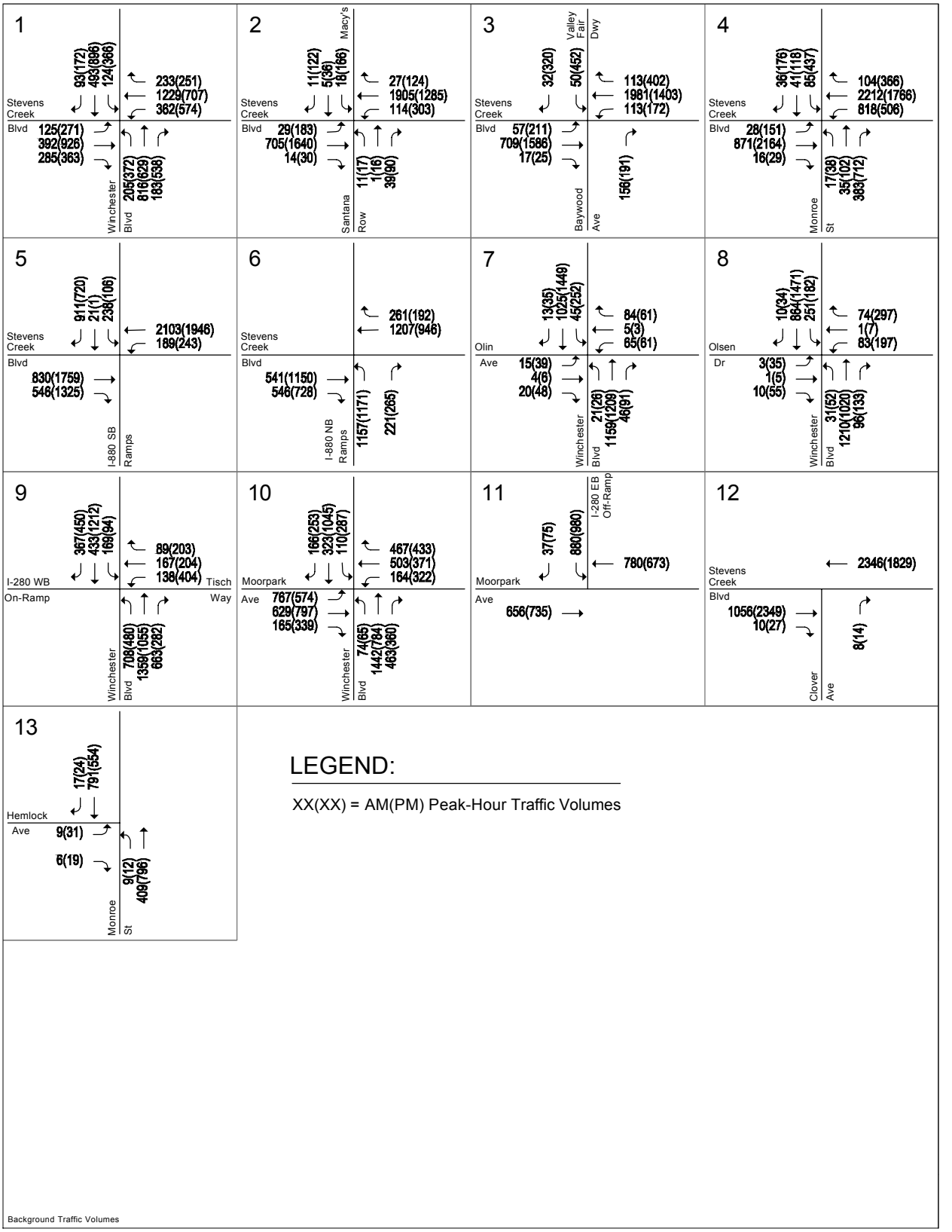

Figure 9
Background Traffic Volumes

Table 5
Background Intersection Levels of Service

Study Number	Intersection	Peak Hour	Existing Avg. Delay	Existing LOS	Background Avg. Delay	Background LOS
1	Winchester Boulevard and Stevens Creek Boulevard *	AM	35.2	D	36.4	D
		PM	46.6	D	52.7	D
2	Santana Row and Stevens Creek Boulevard	AM	13.7	B	12.9	B
		PM	30.8	C	30.8	C
3	Redwood Avenue and Stevens Creek Boulevard	AM	7.5	A	19.6	B
		PM	23.0	C	48.0	D
4	Monroe Street and Stevens Creek Boulevard	AM	29.8	C	36.4	D
		PM	35.4	D	**90.5**	**F**
5	I-880 SB Ramps and Stevens Creek Boulevard *	AM	24.7	C	25.5	C
		PM	23.7	C	25.4	C
6	I-880 NB Ramps and Stevens Creek Boulevard	AM	20.5	C	22.4	C
		PM	22.8	C	24.9	C
7	Winchester Boulevard and Olin Avenue	AM	18.6	B	17.9	B
		PM	20.4	C	19.5	B
8	Winchester Boulevard and Olsen Drive	AM	14.0	B	22.9	C
		PM	19.6	B	32.5	C
9	Winchester Boulevard and I-280 WB on-ramp/Tisch Way	AM	25.6	C	32.7	C
		PM	34.6	C	52.5	D
10	Winchester Boulevard and Moorpark Avenue	AM	38.6	D	42.4	D
		PM	42.1	D	43.5	D
11	I-280 EB off-ramp and Moorpark Avenue *	AM	11.1	B	11.8	B
		PM	12.9	B	13.5	B

* Denotes CMP Intersection
Bold indicates unacceptable level of service.

5. Background Plus Project Conditions

This chapter describes near-term traffic conditions that most likely would occur when the project is complete. It includes a description of the significance criteria used to establish what constitutes a project impact, a description of the transportation system under background plus project conditions, the method by which project traffic is estimated, and any impacts caused by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts. This traffic scenario represents a more congested traffic condition than the existing plus project scenario, since it includes traffic generated by approved projects in the area. Projected traffic volumes based on the trip generation estimates and assignment of project trips were developed using the same methods discussed and presented in Chapter 3.

Project Description

The proposed development would consist of the replacement of an existing gas station on the project site with a hotel with up to 200 rooms. Access to the project site will be provided via one full access driveway along Clover Avenue. A new four-level above-grade parking garage will be constructed as part of the project with one access point located at the end of the entrance drive aisle from Clover Avenue. On-site parking will include six handicap parking spaces on street level near the Clover Avenue entrance to the site and 169 spaces within the on-site parking structure.

Transportation Network Under Background Plus Project Conditions

It is assumed in this analysis that the transportation network under background plus project conditions would be the same as described under background conditions.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. Impacts on intersections are based on the significance criteria and thresholds of the jurisdiction in which the intersection is located.

City of San Jose Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San Jose if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under

background conditions to an unacceptable LOS E or F under background plus project conditions, or

2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.
3. The level of service at a designated Protected Intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by two (2) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one-half percent (.005) or more.

An exception to criteria 2 applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better at non-protected intersections.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below

Trip Generation

Through empirical research, data have been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. Project trip estimates are based on trip generation rates obtained from the Institute of Transportation Engineers' (ITE's) *Trip Generation*, Ninth Edition, 2012.

Proposed Project Trip Generation

Based on the recommended ITE trip generation rates for hotel land uses, the proposed 200-room hotel would generate 1,634 daily vehicle trips, with 106 trips (63 inbound and 43 outbound) occurring during the AM peak hour and 120 trips (61 inbound and 59 outbound) occurring during the PM peak hour.

Existing Trip Generation

Trips associated with the existing uses on the project site are subtracted from the estimated trips to be generated by the proposed project. There is currently an 8-pump gas station on-site that will be replaced by the proposed project. The trips generated by the existing uses on site were obtained from new driveway counts completed in January 2016. Based on the driveway counts, the existing gas station generates 846 daily vehicle trips, with 46 trips (22 inbound and 24 outbound) occurring during the AM peak hour and 83 trips (39 inbound and 44 outbound) occurring during the PM peak hour.

Based on driveway counts and pass-by reductions, the existing site uses currently generate a total of 17 trips during the AM peak hour and 36 trips during the PM peak-hour based on the collected driveway counts.

In addition, trip generation for gas stations are typically adjusted to account for pass-by-trips. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that trips to gas stations are not actually generated by the gas stations, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections (although pass-by traffic is accounted for at the site entrances). ITE data show that gasoline/service stations with convenience markets have average pass-by trip reductions of 62% in the AM peak-hour and 56% in the PM peak-hour.

Based on the ITE trip generation rates and credit for existing use on the project site, it is estimated that the proposed project would generate an additional 1,313 daily trips, with 89 trips (55 inbound and 34 outbound) occurring during the AM peak hour and 84 trips (44 inbound and 40 outbound) occurring during the PM peak hour. The trip generation estimates for proposed project are presented in Table 3 of Chapter 3.

Trip Distribution and Assignment

The trip distribution pattern for the proposed project was estimated based on traffic patterns on the surrounding roadway system and on the locations of complementary land uses. The project trip distribution pattern is shown graphically on Figure 6 in Chapter 3.

The peak-hour trips associated with the proposed project were added to the transportation network in accordance with the distribution pattern discussed above. Figure 7 in Chapter 3 shows the assignment of net project traffic on the local transportation network.

Background Plus Project Traffic Volumes

The project trips were added to background traffic volumes to obtain background plus project traffic volumes. The background plus project traffic volumes at the study intersections are shown graphically on Figure 10. Traffic volumes for all components of traffic are tabulated in Appendix C.

Intersection LOS Under Background Plus Project Conditions

The results of the intersection level of service analysis under background plus project conditions are summarized in Table 6. The results show that, measured against the City of San Jose level service standard and impact criteria, the Monroe Street and Stevens Creek Boulevard intersection is projected to operate at unacceptable LOS F during the PM peak hour and would be significantly impacted by the project. The impacts and proposed improvements to mitigate the impact are described below.

All other study intersections are projected to operate at acceptable levels during both the AM and PM peak hours of traffic when measured against the City of San Jose level of service standard. The intersection level of service calculation sheets are included in Appendix D.

Project Impacts and Mitigation Measures

This section discusses the project impacts identified under background plus project conditions. Included are descriptions of project impacts to intersections and proposed mitigation measures.

(4) Monroe Street and Stevens Creek Boulevard (Protected Intersection)

Impact: This intersection would operate at LOS F during the PM peak hour under background conditions, and the added trips as a result of the project would cause the intersection's critical-movement delay to increase by two or more seconds and the demand-to-capacity ratio (V/C) to increase by 0.005 or more during the PM peak hours. Based on City of San Jose level of service impact criteria for protected intersections, this constitutes a significant impact.

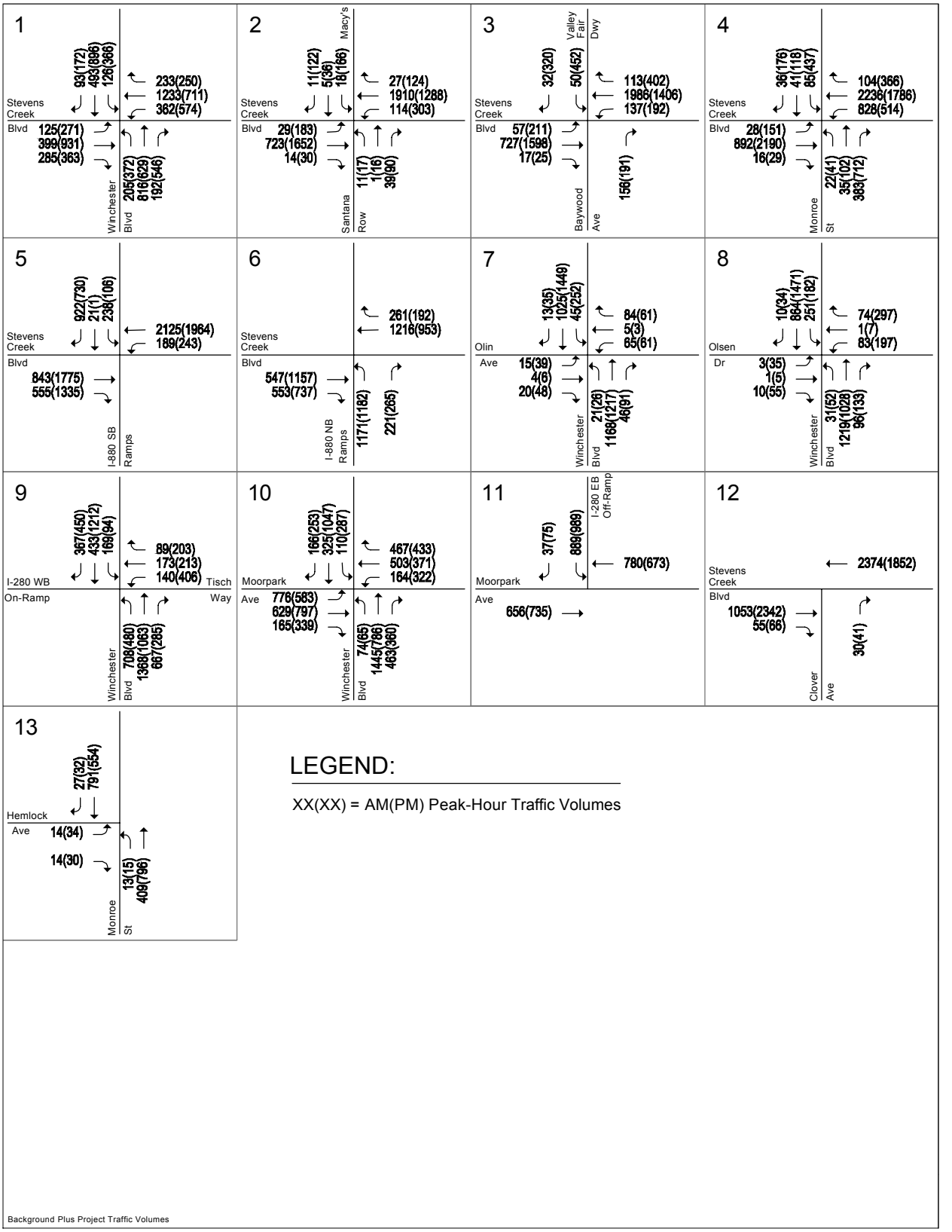

Figure 10
Background Plus Project Traffic Volumes

Table 6
Background Plus Project Levels of Service

Study Number	Intersection	Peak Hour	Background Avg. Delay	Background LOS	Background Plus Project Avg. Delay	Background Plus Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	Winchester Boulevard and Stevens Creek Boulevard *	AM	36.4	D	36.4	D	0.1	0.001
		PM	52.7	D	53.0	D	0.7	0.005
2	Santana Row and Stevens Creek Boulevard	AM	12.9	B	12.9	B	0.0	0.001
		PM	30.8	C	30.7	C	-0.1	0.002
3	Redwood Avenue and Stevens Creek Boulevard	AM	19.6	B	20.1	C	0.0	0.001
		PM	48.0	D	48.6	D	1.8	0.015
4	Monroe Street and Stevens Creek Boulevard	AM	36.4	D	36.6	D	0.1	0.005
		PM	**90.5**	**F**	**92.0**	**F**	**2.5**	**0.007**
5	I-880 SB Ramps and Stevens Creek Boulevard *	AM	25.5	C	25.6	C	0.1	0.007
		PM	25.4	C	25.5	C	0.1	0.005
6	I-880 NB Ramps and Stevens Creek Boulevard	AM	22.4	C	22.5	C	0.1	0.005
		PM	24.9	C	25.0	C	0.1	0.004
7	Winchester Boulevard and Olin Avenue	AM	17.9	B	17.8	B	-0.1	0.002
		PM	19.5	B	19.5	B	0.0	0.000
8	Winchester Boulevard and Olsen Drive	AM	22.9	C	22.9	C	-0.1	0.002
		PM	32.5	C	32.5	C	0.0	0.000
9	Winchester Boulevard and I-280 WB on-ramp/Tisch Way	AM	32.7	C	33.0	C	0.5	0.004
		PM	52.5	D	53.4	D	1.5	0.006
10	Winchester Boulevard and Moorpark Avenue	AM	42.4	D	42.6	D	0.3	0.004
		PM	43.5	D	43.5	D	0.0	0.000
11	I-280 EB off-ramp and Moorpark Avenue *	AM	11.8	B	11.8	B	0.0	0.002
		PM	13.5	B	13.5	B	0.0	0.002

* Denotes CMP Intersection
Bold indicates unacceptable level of service.
Bold and boxed indicate significant impact.

Mitigation Measure. The intersection of Monroe Street and Stevens Creek Boulevard has been identified as a City of San Jose Protected Intersection. Thus, in lieu of physical mitigations at the Monroe Street and Stevens Creek Boulevard intersection, the project will construct offsetting improvements to other parts of the citywide transportation system to improve system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals and policies. The Protected Intersection policy is described in more detail below.

City of San Jose Protected Intersection Policy

The Monroe Street and Stevens Creek Boulevard intersection will be significantly impacted by the project and is identified as a City of San Jose Protected Intersection.

Protected Intersections consist of locations (there are a total of 29) that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect on other transportation facilities (such as pedestrian, bicycle, transit systems, etc.). Protected Intersections are, therefore, not required to maintain a Level of Service D, which is the City of San Jose standard. The deficiencies at all 29 Protected Intersections in the City of San Jose have been disclosed and overridden in previous EIRs.

If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided. The offsetting improvements are intended to provide other transportation benefits for the community adjacent to the traffic impact. The improvements may include enhancements to pedestrian, bicycle, and transit facilities, as well as neighborhood traffic calming measures and other roadway improvements.

The City will identify the specific offsetting improvements, which should be agreed upon by the community. Priority is given to improvements identified in previously adopted plans such as area-wide specific or master plans, redevelopment plans, or plans prepared through the Strong Neighborhoods Initiative. Community outreach should occur in conjunction with the project review and approval process. Once the specific improvements have been identified, the developer must submit improvement plans to the City of San Jose Department of Public Works for review and approval. The specific offsetting improvements proposed can be finalized during the subsequent planning permit stages and can be described in the Final EIR.

The Protected Intersection Policy has established a fee to fund the identified alternative transportation improvements. The fee as of July 1, 2015 is equal to $2,821 per net peak hour project trip for one intersection impact and $4,232 per net peak hour project trip for multiple intersection impacts. The base fee will automatically adjust annually on July 1st based on a 3.5 percent annual cost escalation. The 3.5 percent escalation cost is based on a 20-year average construction cost factor. For the purpose of determining the Protected Intersection LOS impact fee, net peak hour project trips are defined as the total number of peak hour trips generated by the project during the highest peak hour period after all appropriate trip credits have been applied. The value of the improvements should be equal to the established fees.

Traffic Operations at the Significantly Impacted Intersections

Traffic conditions at the study intersections were evaluated using level of service (LOS). The level of service methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using TRAFFIX software and evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Note that the TRAFFIX level of service calculation sheets (Appendix D) include vehicle delay, as well as volume-to-capacity (V/C) ratio, for each individual movement at the intersection. In addition, the intersection level of service analysis was supplemented with an evaluation of vehicle queuing (length or number of vehicles) for individual high demand turn movements at the study intersections. Average control delay, vehicle delay, and V/C ratio for individual movements, and vehicle queuing collectively provide a useful measure of effectiveness (MOE) for describing traffic operational conditions at an intersection. A detailed vehicle queuing analysis is included in Chapter 6 of this traffic report.

Freeway Segment Capacity Evaluation

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent to any freeway segments in the area, freeway analysis for the CMP was not required. The percentage of traffic projected to be added by the project to freeway segments in the project area is summarized in Table 7.

Table 7
Freeway Segment Capacity

					Existing Plus Project				Project Trips			
					Mixed-Flow Lane		HOV Lane		Mixed-Flow Lane		HOV Lane	
#	Freeway	Segment	Direction	Peak Hour	# of Lanes[1]	Capacity (vph)	# of Lanes[1]	Capacity (vph)	Volume	% of Capacity	Volume	% of Capacity
1	SR 17	between Hamilton Avenue and I-280	NB	AM	3	6,900	--	--	5	0.07	--	--
			NB	PM	3	6,900	--	--	4	0.06	--	--
2	I-880	between I-280 and Stevens Creek Boulevard	NB	AM	3	6,900	--	--	0	0.00	--	--
			NB	PM	3	6,900	--	--	0	0.00	--	--
3	I-880	between Stevens Creek Boulevard and Bascom Avenue	NB	AM	3	6,900	--	--	7	0.10	--	--
			NB	PM	3	6,900	--	--	9	0.13	--	--
4	I-280	between Saratoga Avenue and Winchester Boulevard	EB	AM	3	6,900	1	1,650	8	0.12	1	0.06
			EB	PM	3	6,900	1	1,650	6	0.09	3	0.18
5	I-280	between Winchester Boulevard and I-880	EB	AM	3	6,900	1	1,650	0	0.00	0	0.00
			EB	PM	3	6,900	1	1,650	0	0.00	0	0.00
6	I-280	between I-880 and Meridian Avenue	EB	AM	3	6,900	1	1,650	5	0.07	1	0.06
			EB	PM	3	6,900	1	1,650	5	0.07	2	0.12
7	I-280	between Meridian Avenue and I-880	WB	AM	3	6,900	1	1,650	7	0.10	2	0.12
			WB	PM	3	6,900	1	1,650	5	0.07	2	0.12
8	I-280	between I-880 and Winchester Boulevard	WB	AM	3	6,900	1	1,650	0	0.00	0	0.00
			WB	PM	3	6,900	1	1,650	0	0.00	0	0.00
9	I-280	between Winchester Boulevard and Saratoga Avenue	WB	AM	3	6,900	1	1,650	4	0.06	2	0.12
			WB	PM	3	6,900	1	1,650	8	0.12	1	0.06
10	I-880	between Bascom Avenue and Stevens Creek Boulevard	SB	AM	3	6,900	--	--	11	0.16	--	--
			SB	PM	3	6,900	--	--	10	0.14	--	--
11	I-880	between Stevens Creek Boulevard and I-280	SB	AM	3	6,900	--	--	0	0.00	--	--
			SB	PM	3	6,900	--	--	0	0.00	--	--
12	SR 17	between I-280 and Hamilton Avenue	SB	AM	3	6,900	--	--	3	0.04	--	--
			SB	PM	3	6,900	--	--	3	0.04	--	--

[1] Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2014.

6. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions. Cumulative development typically includes projects that are in the pipeline (pending projects) but are not yet approved. It includes descriptions of nearby pending developments and the procedure used to estimate traffic volumes associated with them. Cumulative conditions reflect traffic conditions that would occur at the time that the proposed project is completed. The analysis of cumulative conditions is required by the CMP and in conformance with the California Environmental Quality Act CEQA.

Significant Impact Criteria

A significant cumulative traffic impact at an intersection is identified by comparing cumulative with project traffic conditions against background traffic conditions.

City of San Jose Definition of Significant Intersection Impacts

The cumulative projects collectively would create a significant adverse impact on traffic conditions at a signalized intersection in the City of San Jose if during either the AM or PM peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under cumulative conditions, or
2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of cumulative project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds and the volume-to-capacity ratio (V/C) to increase by 0.01 or more.
3. The level of service at a designated Protected Intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by two (2) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one-half percent (.005) or more.

An exception to criteria 2 applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better at non-protected intersections.

Project Contribution to Cumulative Impacts

A single project's contribution to a cumulative intersection impact is deemed considerable in the City of San Jose if the proportion of project traffic represents 25 percent or more of the increase in total volume from background traffic conditions to cumulative traffic conditions.

Transportation Network under Cumulative Conditions

The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions with the exception of roadway improvements planned as part of the Santana Row West project described below.

Winchester Boulevard and Olsen Drive – the Santana Row West project is proposing to convert the west approach of this intersection to provide one left-turn lane, one shared through and left-turn, and one right-turn lane and add a second northbound left-turn lane.

Cumulative Traffic Volumes

Traffic volumes under cumulative conditions were estimated by adding the trips from approved developments, estimated project trips, and trips from proposed but not yet approved (pending) development projects. Cumulative conditions include trips generated by the following pending development projects in the immediate area of the proposed project:

350 Winchester Boulevard Mixed-Use – 14,309 s.f. of retail space, 29,488 s.f. of office space, 6,715 s.f. of restaurant space, and 330 dwelling units.

Santana Row West – 969,051 s.f. of office space and 29,000 s.f. of retail space.

Traffic estimated to be generated by pending development projects in the Cities of Campbell and Santa Clara also were included in the cumulative conditions traffic volumes. Figure 11 shows cumulative traffic volumes. Appendix C lists each of the components used to tabulate cumulative traffic volume at each intersection.

Cumulative Intersection Level of Service Analysis

The intersection level of service results under cumulative conditions are summarized in Table 8. The results show that, measured against the City of San Jose level of service impact criteria, the estimated cumulative project trips collectively would create a significant adverse traffic impact at the following four intersections located in the City of San Jose during at least one peak hour:

1. Winchester Boulevard and Stevens Creek Boulevard* (PM Peak Hour)
4. Monroe Street and Stevens Creek Boulevard (PM Peak Hour)
9. Winchester Boulevard and I-280 WB on-ramp/Tisch Way (AM & PM Peak Hours)

* Denotes CMP Intersection

The addition of cumulative project trips at the remaining City of San Jose study intersections would not create a significant adverse traffic impact when measured against the City of San Jose level of service standard. The intersection level of service calculation sheets are included in Appendix D.

The project's contribution in total volume from background traffic conditions to cumulative traffic conditions would be less than 25 percent at all of the intersections identified to be impacted by the total cumulative project trips. Therefore, the proposed project traffic will not result in a significant impact under cumulative conditions.

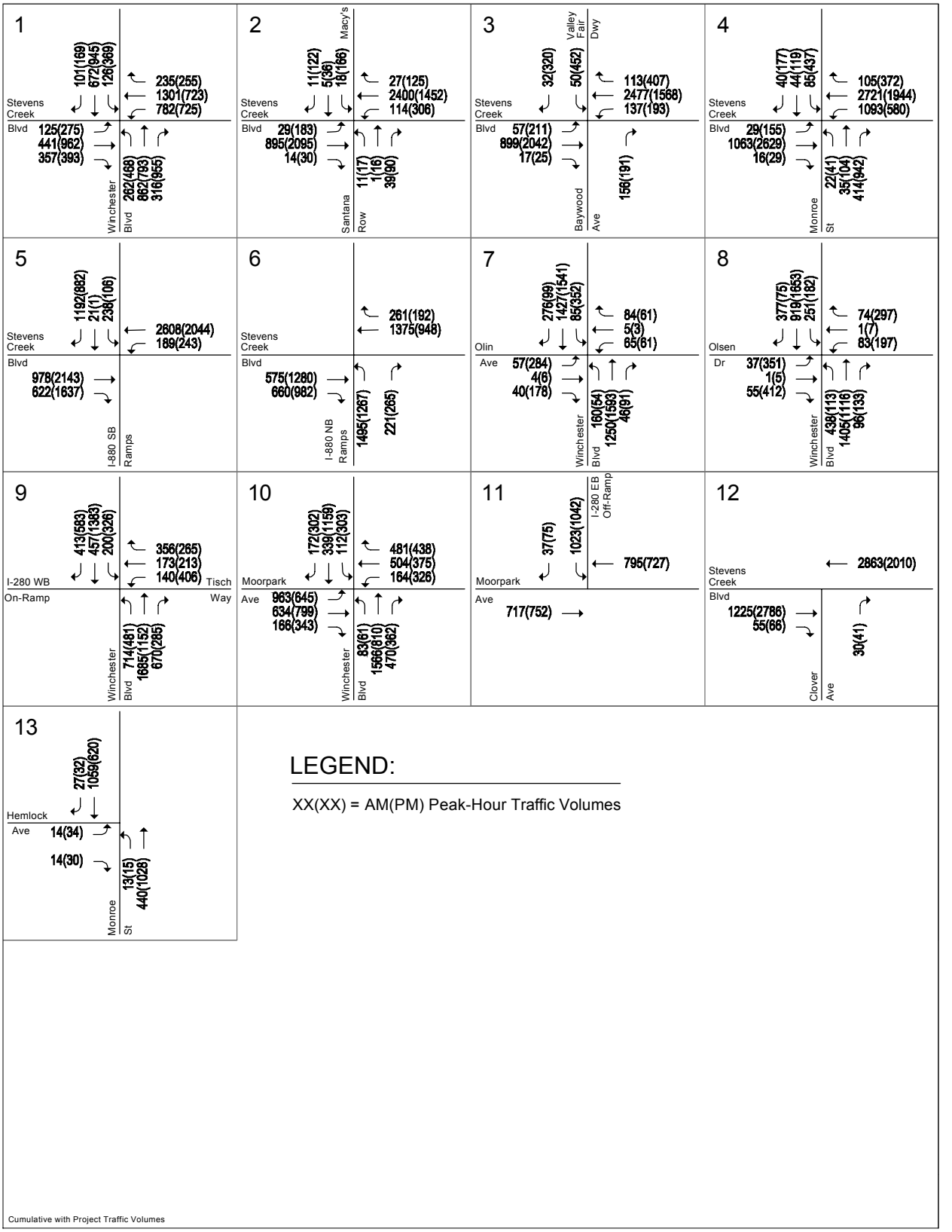

Figure 11
Cumulative with Project Conditions Traffic Volumes

Table 8
Cumulative Conditions Intersection Levels of Service

Study Number	Intersection	Peak Hour	Background Avg. Delay	Background LOS	Cumulative Avg. Delay	Cumulative LOS	Cumulative Incr. In Crit. Delay	Cumulative Incr. In Crit. V/C	% of Project Contribution
1	Winchester Boulevard and Stevens Creek Boulevard *	AM	36.4	D	40.7	D	14.2	0.232	
		PM	52.7	D	**89.8**	**F**	**98.8**	**0.333**	**2%**
2	Santana Row and Stevens Creek Boulevard	AM	12.9	B	12.9	B	0.8	0.096	
		PM	30.8	C	28.8	C	-1.9	0.088	
3	Redwood Avenue and Stevens Creek Boulevard	AM	19.6	B	19.1	B	-0.4	0.094	
		PM	48.0	D	51.7	D	10.9	0.100	
4	Monroe Street and Stevens Creek Boulevard	AM	36.4	D	43.0	D	7.2	0.120	
		PM	**90.5**	**F**	**159.1**	**F**	**99.1**	**0.238**	**6%**
5	I-880 SB Ramps and Stevens Creek Boulevard *	AM	25.5	C	28.2	C	4.4	0.162	
		PM	25.4	C	27.4	C	2.0	0.110	
6	I-880 NB Ramps and Stevens Creek Boulevard	AM	22.4	C	24.1	C	1.7	0.109	
		PM	24.9	C	25.8	C	1.3	0.058	
7	Winchester Boulevard and Olin Avenue	AM	17.9	B	21.2	C	7.4	0.207	
		PM	19.5	B	33.8	C	25.2	0.290	
8	Winchester Boulevard and Olsen Drive	AM	22.9	C	26.6	C	5.3	0.073	
		PM	32.5	C	47.0	D	18.3	0.283	
9	Winchester Boulevard and I-280 WB on-ramp/Tisch Way	AM	32.7	C	**56.1**	**E**	**42.7**	**0.196**	**3%**
		PM	52.5	D	**74.7**	**E**	**28.6**	**0.101**	**3%**
10	Winchester Boulevard and Moorpark Avenue	AM	42.4	D	49.5	D	11.6	0.102	
		PM	43.5	D	43.9	D	0.7	0.017	
11	I-280 EB off-ramp and Moorpark Avenue *	AM	11.8	B	12.3	B	0.2	0.037	
		PM	13.5	B	13.7	B	0.1	0.019	

* Denotes CMP Intersection
Bold indicates unacceptable level of service.
Bold and boxed indicate significant impact.

7. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project site, including:

- Potential impacts to transit, bicycle, and pedestrian facilities
- Site access and traffic operations under background plus project conditions

These other transportation issues were evaluated to determine if any deficiencies would exist under project conditions that may not be specifically linked to environmental impact reporting. These may not be considered environmental issues, and may not be evaluated in an environmental assessment, but have been included in the traffic study to meet the requirements of the local jurisdiction. Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Site Access

A review of the project site plan was performed to determine if adequate site access and on-site circulation are provided and to identify any access or circulation issues that should be improved. This review is based on the site plan prepared by Jonathan Nehmer + Associates, Inc. dated May 6, 2016 presented on Figure 2 and in accordance with generally accepted traffic engineering standards.

The proposed project access will be taken exclusively by one entrance along Clover Avenue located at the southern perimeter of the project boundary. The entrances to the existing gas station on-site along Stevens Creek Boulevard as well as the driveway along Clover Avenue will be eliminated.

Four-levels of above-grade parking will be constructed as part of the project with one access point located at the end of the entrance drive aisle from Clover Avenue. On-site parking will include six handicap parking spaces on street level near the Clover Avenue entrance to the site and 169 spaces within the on-site parking structure. The site plan indicates that the garage access point will provide one inbound lane and one outbound lane.

The driveway on Clover Avenue is shown to be 20 feet wide. According to the City of San Jose municipal code, on-site drive aisles that serve two-way drive aisles should be 26 feet wide and driveway widths should match the 26 feet wide drive aisles. the project will be required to construct the Clover Avenue driveway to meet the 26 feet wide city standard. Project trips at the project access point along Clover Avenue are shown in Figure 12.

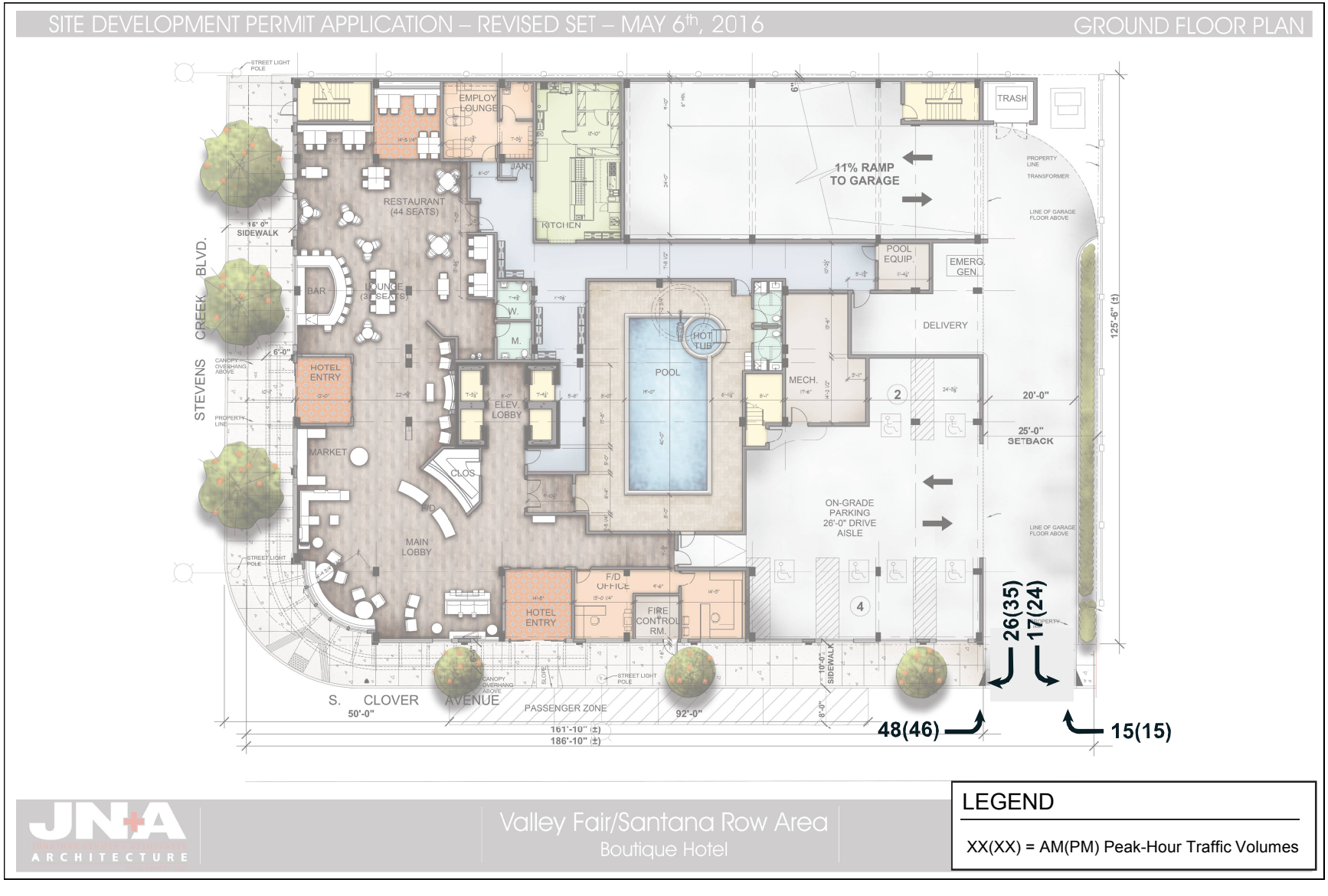

Figure 12
Traffic Volumes at Project Access

On-Site Circulation

On-site vehicular circulation was reviewed for the project in accordance with generally accepted traffic engineering standards. Access to each level of parking will be provided via ramped circulation drive aisles that are accessed via the Clover Avenue entrance. Based on the proposed site plan, on-site vehicular circulation will be efficient with simple rectangular circulation aisles within each parking level.

The City's standard width for two-way drive aisles is 26 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of parking spaces. As shown on the site plan, the drive aisles with adjacent parking on each level measure 26 feet wide and meet the City's standard width.

Truck Access

A delivery area is shown on- site between the garage and street level parking access points. The delivery area would be accessed via the entrance drive aisle from Clover Avenue.

Trash enclosures are shown to be located at the end of the entrance drive aisle from Clover Avenue. The drive aisle will require that garbage trucks enter the driveway and back out to Clover Avenue to exit. Garbage trucks also may utilize the on-site delivery area to turn-around for exit if it is not occupied.

The site plan also indicates a passenger loading zone along the project's frontage on Clover Avenue. Per City request, the passenger loading zone will be restricted to passenger drop-off/pick-up only and will not be used for truck loading. In addition, the passenger loading zone must be located such that a minimum 15 feet of red curb is provided at the existing fire hydrant along Clover Avenue or the fire hydrant must be relocated.

Overall, the site plan exhibits adequate site access for motor vehicles and large trucks. The City ultimately will determine the adequacy of the proposed driveways and internal on-site circulation design.

Intersection Operations Analysis

The operations analysis is based on vehicle queuing for high demand turning movements at intersections. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x=n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x=n) = probability of "n" vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future left-turn storage requirements at intersections. The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Likewise, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn storage pocket designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the "design queue length". The vehicle queue estimates and a tabulated summary of the findings are provided in Table 9. The vehicular queuing analysis (Poisson probability calculations) is included in Appendix E.

Table 9
Vehicle Queue and Left-turn Storage Capacity

Measurement	Redwood/ Stevens Creek WBL AM	Redwood/ Stevens Creek WBL PM	Monroe/ Stevens Creek WBL AM	Monroe/ Stevens Creek WBL PM	Monroe/ Stevens Creek NBL AM	Monroe/ Stevens Creek NBL PM
Existing Conditions						
Cycle/Delay[1] (sec)	126	140	126	140	126	140
Lanes	1	1	2	2	1	1
Volume (vph)	27	88	328	291	16	37
Volume (vphpl)	27	88	164	146	16	37
Avg. Queue (veh/ln.)	0.9	3.4	5.7	5.7	0.6	1.4
Avg. Queue[2] (ft./ln)	24	86	144	141	14	36
95th %. Queue (veh/ln.)	3	7	10	10	2	4
95th %. Queue (ft./ln)	75	175	250	250	50	100
Storage (ft./ ln.)	125	125	325	325	50	50
Adequate (Y/N)	YES	**NO**	YES	YES	YES	**NO**
Background Conditions						
Cycle/Delay[1] (sec)	126	140	126	140	126	140
Lanes	1	1	2	2	1	1
Volume (vph)	113	172	818	506	17	38
Volume (vphpl)	113	172	409	253	17	38
Avg. Queue (veh/ln.)	4.0	6.7	14.3	9.8	0.6	1.5
Avg. Queue[2] (ft./ln)	99	167	358	246	15	37
95th %. Queue (veh/ln.)	7	11	21	15	2	4
95th %. Queue (ft./ln)	175	275	525	375	50	100
Storage (ft./ ln.)	125	125	325	325	50	50
Adequate (Y/N)	**NO**	**NO**	**NO**	**NO**	YES	**NO**
Background Plus Project Conditions						
Cycle/Delay[1] (sec)	126	140	126	140	126	140
Lanes	1	1	2	2	1	1
Volume (vph)	137	192	828	514	22	41
Volume (vphpl)	137	192	414	257	22	41
Avg. Queue (veh/ln.)	4.8	7.5	14.5	10.0	0.8	1.6
Avg. Queue[2] (ft./ln)	120	187	362	250	19	40
95th %. Queue (veh/ln.)	9	12	21	15	2	4
95th %. Queue (ft./ln)	225	300	525	375	50	100
Storage (ft./ ln.)	125	125	325	325	50	50
Adequate (Y/N)	**NO**	**NO**	**NO**	**NO**	YES	**NO**

[1] Vehicle queue calculations based on cycle length for signalized intersections.
[2] Assumes 25 feet per vehicle queued

Redwood Avenue and Stevens Creek Boulevard

Westbound Left-Turn

The queuing analysis indicates that the maximum vehicle queue for the westbound left-turn pocket at the Redwood Avenue and Stevens Creek Boulevard intersection currently exceeds the existing vehicle

storage capacity, and will continue to do so under background and background plus project conditions during PM peak hour.

The westbound left-turn pocket currently provides approximately 125 feet of vehicle storage, which can accommodate about five vehicles. The estimated 95th percentile vehicle queue for the westbound left-turn movement is projected to be approximately 11 vehicles during the PM peak hour under background conditions. The addition of project traffic would lengthen the projected vehicle queue by no more than one vehicle during the PM peak hour.

The existing westbound left-turn pocket can be planned to provide the necessary 300 feet of storage by removing the existing median and trees along Stevens Creek Boulevard. The westbound left-turn pocket at the Redwood Avenue and Stevens Creek Boulevard intersection will be modified along with the planned re-location of the intersection as part of the planned Valley Fair expansion.

Monroe Street and Stevens Creek Boulevard

Westbound Left-Turn

The queuing analysis indicates that the maximum vehicle queues for the westbound left-turn pockets at the Monroe Street and Stevens Creek Boulevard intersection would exceed the existing vehicle storage capacity under background and project conditions during the AM and PM peak hours.

The westbound left-turn pockets currently provide approximately 325 feet of vehicle storage per lane, which can accommodate about 13 vehicles per lane. The estimated 95th percentile vehicle queue for the westbound left-turn movement is projected to be approximately 21 vehicles per lane during the AM peak hour under background conditions. The addition of project traffic at the location would not cause the projected vehicle queues to increase beyond what is projected under background conditions. Therefore, the addition of project traffic would not result in the need to improve the intersection turn-pockets.

Northbound Left-Turn

The queuing analysis indicates that the maximum vehicle queue for the northbound left-turn pocket at the Monroe Street and Stevens Creek Boulevard intersection currently exceed the existing vehicle storage capacity and will continue to do so under background and background plus project conditions during PM peak hour.

The northbound left-turn pocket currently provides approximately 50 feet of vehicle storage, which can accommodate about two vehicles per lane. The estimated 95th percentile vehicle queue for the northbound left-turn movement is projected to be approximately four vehicles during the PM peak hour under background conditions. The addition of project traffic at the location would not cause the projected vehicle queues to increase beyond what is projected under background conditions. Therefore, the addition of project traffic would not result in the need to improve the intersection turn-pockets.

Signal Warrant Analysis

The need for signalization of an unsignalized intersection is assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD)*, Part 4, Highway Traffic Signals, 2014. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Additional analysis may include unsignalized level of service analysis and/or operational analysis such as evaluating vehicle queuing and delay. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions. The traffic signal warrant calculations are included in Appendix F.

Peak-hour traffic signal warrant checks indicate that the projected traffic volumes at the Hemlock Avenue/Monroe Street and Clover Avenue/Stevens Creek Boulevard intersections would fall below the thresholds that warrant signalization.

Transit Services

The project site is not directly served by any transit services other than the limited stop 323 VTA bus line that has a stop at the intersection of Santana Row and Stevens Creek Boulevard approximately 900 feet west of the project site. Local bus line 60 operates along Winchester Boulevard. Bus stops for this line in the northbound and southbound directions are located near the Winchester Boulevard/Olin Avenue and Winchester Boulevard/Olsen Drive intersections, respectively. It can be assumed that some guests/employees of the proposed hotel would utilize the existing transit service. Applying an estimated three percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately three new transit riders during the AM peak hour and four during the PM peak hour. Assuming the existing transit service would remain unchanged with line 60 providing service with 15-20-minute headways during the peak commute periods at bus stops along Winchester Boulevard, the estimated number of new transit riders using the bus stops located near the project site would equate to no more than one new rider per bus during the peak hours. VTA operations reports indicate that the 60 bus line as well as several other bus lines in the project area serve less than ideal ridership. Therefore, the new riders due to the proposed project could be accommodated by the current available capacity of the bus service in the study area and improvement of the existing transit service would not be necessary with the project.

Bicycle and Pedestrian Facilities

Currently, there are no existing pedestrian/bike links between the project site and other existing pedestrian/bike and transit facilities in the area. The San Jose Bike Plan 2020 and Envision 2040 General Plan, as described below, identify planned improvements to the bicycle network within the City and provide policies and goals that are intended to promote and encourage the use of multi-modal travel options and reduce the identified project impacts to the roadway system. The planned improvements to the bicycle network will provide the project site with improved connections to surrounding pedestrian/bike and transit facilities and a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies.

Pedestrian traffic primarily would consist of guest and employees of the proposed hotel development walking to and from surrounding retail establishments, as well as bus stops on Stevens Creek Boulevard and Winchester Boulevard. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. All of the roadways in the vicinity of the project site have sidewalks on both sides of the street.

Public Transit/Pedestrian/Bike Improvements

The proposed project site is located within the Valley Fair/Santana Row Urban Village Boundary and fronts Stevens Creek Boulevard, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below:

- Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The planned improvements discussed below are intended to reduce the identified project impacts to the roadway system by providing the project site with viable connections to surrounding pedestrian/bike and transit facilities and provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements are beyond the means of the proposed project given that they may require right-of-way from adjacent properties. The project could be required to make a fair-share contribution towards the cost of the improvements since the identified improvements would be of benefit to the project.

Bicycle and Pedestrian Facility Improvements

The Envision 2040 General Plan identifies the following goals in regards to bicycling and pedestrians:

- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II Bike lanes are planned for:

- Monroe Street, between Newhall Street and Tisch Way
- Moorpark Avenue, between Williams Road and College Drive
- Winchester Boulevard, between Moorpark Avenue and Payne Avenue
- Tisch Way, between Winchester Boulevard and Monroe Avenue

Transit Facility Improvements

The Envision 2040 General Plan identifies the following goals in regards to public transit:

- Pursue development of BRT, bus, shuttle, and fixed guideway services on designated streets and connections to major destinations.
- Ensure that roadways designated as Grand Boulevards adequately accommodate transit vehicle circulation and transit stops. Prioritize bus mobility along Stevens Creek Boulevard.

Stevens Creek Boulevard has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. Given that the project fronts Stevens Creek Boulevard, the project shall be required to implement the following Grand Boulevard design principles:

- Provide a minimum 15 feet sidewalk width along its frontage on Stevens Creek Boulevard
- Minimize driveway cuts to minimize transit delay

- Provide enhanced shelters for transit services

There is a BRT line planned for the West San Carlos Street/Stevens Creek Boulevard corridor. The BRT will run on Stevens Creek Boulevard. Two BRT infrastructure solutions have been proposed: a single reversible transit-only lane between Winchester and MacArthur; and a dual-lane, transit-only overhead viaduct between Henry and MacArthur. The former option would include a center passing lane through the station loading areas, while the latter would include an aerial station.

The Stevens Creek Boulevard corridor serves as the primary access point to major retail/commercial destinations along Stevens Creek Boulevard and access to the area from the regional freeways of I-280 and I-880 is limited to their interchanges with Stevens Creek Boulevard. The proposed center lane BRT will require the removal of one travel lane in each direction of travel along a segment of Stevens Creek Boulevard between Winchester Boulevard and I-880 that is already congested. The removal of vehicular capacity along the primary travel corridor will result in a significant increase in congestion on the segment. Therefore, it is recommended that future BRT service along Stevens Creek Boulevard between Winchester Boulevard and I-880 be accommodated within the existing travel lanes.

The West San Carlos Street/Stevens Creek Boulevard BRT is in only the preliminary stages of its environmental review and there is no identified schedule for its completion.

Parking

Per the City of San Jose Municipal Code (Chapter 20.90.060) hotel land uses are required to provide one space per hotel room or suite plus one space per employee. Based on the City's parking requirements and an identified 15 hotel employees for the proposed 200-room hotel, the project is required to provide a total of 215 off-street parking spaces. The City of San Jose Urban Village Overlay parking reductions are applicable to the project site since the project site is located within the Valley Fair/Santana Row Urban Village. The Urban Village Overlay allows for a reduction in the required on-site parking by 20%. The application of the reduction would result in the requirement of 172 on-site parking spaces for the project.

The project proposes to provide a total of 175 on-site parking spaces. Therefore, adequate on-site parking will be provided per City parking requirements.

Bicycle Parking

For hotel land uses, the City's Bicycle Parking requirements require one bicycle parking space plus one space per 10 guest rooms. Based on the City's Bicycle Parking requirements, the proposed project is required to provide 21 bicycle parking spaces to meet the city standards. The site plan indicates that the proposed project will include a bike room on street level adjacent to the garage entrance. The proposed bike room shall include a minimum of 21 bicycle parking spaces.

Effects on Surrounding Residential Streets

The proposed project site fronts the major Stevens Creek Boulevard thoroughfare. As proposed, direct access to the project site would be provided via one access point along Clover Avenue. It is anticipated that the majority of the project traffic would utilize the intersection of Clover Avenue with Stevens Creek Boulevard to access the project site. However, some project traffic could utilize Monroe Street and Hemlock Avenue. For this reason, an evaluation of the effects of project traffic along Clover Avenue and Hemlock Avenue was completed.

The evaluation consists of a roadway segment analysis to quantify the potential change in traffic volumes along the study roadway segments as a result of the proposed project. For the evaluation, the existing and projected daily traffic volumes with the project along the study roadway segments were compared to

acceptable volume thresholds for each roadway segment to determine if the projected change in traffic volume would be significant.

Unlike the intersection level of service analysis methodology, which has established impact thresholds, the analyses contained in this section are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Several studies have been made regarding the indirect impacts of traffic on residential neighborhoods. The variables affecting these impacts include traffic volumes, type, or makeup, of traffic (i.e. passenger cars, trucks, motorcycles, emergency vehicles, etc.), traffic speed, perception of through traffic as a percentage of total traffic, adequacy of street alignment (i.e., horizontal and vertical curvature), accident experience, on-street parking, residential dwelling setbacks from the street, pedestrian traffic, and street pavement conditions (which would add to traffic noise as the pavement deteriorates). Other factors that may be a contributor to neighborhood nuisance levels include socio-economic status of the neighborhood, and expectations of the residents regarding traffic volumes; however, these are beyond the purview of CEQA and are provided here for informational purposes only.

Existing Roadway Characteristics

Each of the roadway segments provide access to not only the residential land uses that line each street but also provide a connection between to major roadways (Steven Creek Boulevard and Monroe Street). Therefore, cut-through or commercial traffic is present along each of the streets. A brief description of each of the selected surrounding roadways is provided below:

- *Clover Avenue* – Is a two-lane roadway that runs between Stevens Creek Boulevard and Hemlock Avenue. Parking also is prohibited along the west side of Clover Avenue between 6:00 PM – 7:00 AM Monday through Friday and anytime Saturday and Sunday except by permit. The roadway is lined by residential as well as commercial/office land uses.
- *Hemlock Avenue* – Is a two-lane roadway that runs between Clover Avenue and Monroe Street. The roadway is lined by residential as well as commercial/office land uses. Parking is prohibited along the north side of the street at all times and along the south side between 6:00 PM – 7:00 AM Monday through Friday and anytime Saturday and Sunday except by permit.

Estimated Project Traffic

The effects of project traffic on the each of the streets was evaluated based on field observations, the collection of traffic volume and speed data collected in January 2016, and projections of the additional project generated traffic. Table 10 presents a summary of existing and projected traffic volumes and speeds along each of the studied streets.

Table 10
Average Daily Traffic Volumes and Speed along Surrounding Streets

		Average Daily Traffic (ADT)			
Segment Name	Date	Existing	Net Project Trips	Existing Plus Project	85th Percentile Speed
Hemlock Avenue, West of Monroe Street	01/21/16	**938**	**417**	**1,355**	**24**
Clover Avenue, South of Stevens Creek Boulevard	01/21/16	**620**	**417**	**1,037**	**25**

Clover and Hemlock Avenues could be classified as residential streets given that they serve residential land uses and are narrow. General guidelines regarding threshold volumes pertaining to residential streets have been recommended within several studies and reference material including the Highway Capacity Manual (HCM). There is variation in these accepted threshold volumes, but in general,

residential streets have the primary function of providing access to immediately adjacent land, with the secondary function of traffic movement. One lane of traffic in each direction is the standard for residential streets. A residential (or local) street is defined by the City of San Jose as being less than 60 feet wide and average daily traffic (ADT) volumes typically ranging from 50 to 2,000 vehicles.

The 24-hour tube counts indicate that the existing traffic volumes along Hemlock Avenue are approximately 940 daily vehicles and along Clover Avenue 620 daily vehicles. It is projected that the project would result in the addition of 417 daily trips to each of the streets. Although the projected average daily trips are within an acceptable range for this type of street, the added project trips constitute a measurable increase from the existing volumes. However, it is important to note that the proposed project is similar to surrounding land uses along both Clover and Hemlock Avenues. In addition, the proposed project traffic is not considered cut-through traffic given that each of the roadways serve as primary access roads to the project site.

Speed surveys also were conducted along Hemlock and Clover Avenues. The posted speed limit along both streets is 25 mph. Based on the collected data, the 85th percentile speed along both streets is within the 25 mph posted speed limits. Therefore, it can be concluded that there is not an obvious speeding issue along the either of the streets, and the posted speed limits are adequate.

8. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Jose and the Congestion Management Program (CMP) of Santa Clara County. The study included the analysis of AM and PM peak hour traffic conditions for 11 signalized intersections and two unsignalized intersections. Project impacts on other transportation facilities, such as bicycle facilities and transit service, were determined on the basis of engineering judgment.

Background Plus Project Intersection Level of Service Analysis

The results show that one intersection would be significantly impacted by the project, according to City of San Jose impact criteria. The impact and proposed improvements to mitigate the impact are described below.

(4) Monroe Street and Stevens Creek Boulevard (Protected Intersection)

Mitigation Measure. The intersection of Monroe Street and Stevens Creek Boulevard has been identified as a City of San Jose Protected Intersection. Thus, in lieu of physical mitigations at the Monroe Street and Stevens Creek Boulevard intersection, the project will construct offsetting improvements to other parts of the citywide transportation system to improve system-wide roadway capacity or to enhance non-auto travel modes in furtherance of the General Plan goals and policies. The Protected Intersection policy is described in more detail below.

City of San Jose Protected Intersection Policy

The Monroe Street and Stevens Creek Boulevard intersection will be significantly impacted by the project and is identified as a City of San Jose Protected Intersection.

Protected Intersections consist of locations (there are a total of 29) that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect on other transportation facilities (such as pedestrian, bicycle, transit systems, etc.). Protected Intersections are, therefore, not required to maintain a Level of Service D, which is the City of San Jose standard. The deficiencies at all 29 Protected Intersections in the City of San Jose have been disclosed and overridden in previous EIRs.

If a development project has significant traffic impacts at a designated Protected Intersection, the project may be approved if offsetting Transportation System Improvements are provided. The offsetting improvements are intended to provide other transportation benefits for the community adjacent to the

traffic impact. The improvements may include enhancements to pedestrian, bicycle, and transit facilities, as well as neighborhood traffic calming measures and other roadway improvements.

The City will identify the specific offsetting improvements, which should be agreed upon by the community. Priority is given to improvements identified in previously adopted plans such as area-wide specific or master plans, redevelopment plans, or plans prepared through the Strong Neighborhoods Initiative. Community outreach should occur in conjunction with the project review and approval process. Once the specific improvements have been identified, the developer must submit improvement plans to the City of San Jose Department of Public Works for review and approval. The specific offsetting improvements proposed can be finalized during the subsequent planning permit stages and can be described in the Final EIR.

The Protected Intersection Policy has established a fee to fund the identified alternative transportation improvements. The fee as of July 1, 2015 is equal to $2,821 per net peak hour project trip for one intersection impact and $4,232 per net peak hour project trip for multiple intersection impacts. The base fee will automatically adjust annually on July 1st based on a 3.5 percent annual cost escalation. The 3.5 percent escalation cost is based on a 20-year average construction cost factor. For the purpose of determining the Protected Intersection LOS impact fee, net peak hour project trips are defined as the total number of peak hour trips generated by the project during the highest peak hour period after all appropriate trip credits have been applied. The value of the improvements should be equal to the established fees.

Freeway Segment Capacity

Per CMP technical guidelines, freeway segment level of service analysis shall be conducted on all segments to which the project is projected to add one percent or more to the segment capacity. Since the project is not projected to add one percent to any freeway segments in the area, freeway analysis for the CMP was not required.

Cumulative Intersection Level of Service Analysis

The results show that, measured against the City of San Jose level of service impact criteria, the project's contribution in total volume from background traffic conditions to cumulative traffic conditions would be less than 25 percent at all of the intersections identified to be impacted by the total cumulative project trips. Therefore, the proposed project traffic will not result in a significant impact under cumulative conditions.

Other Transportation Issues

Site Access

The proposed project access will be taken exclusively by one entrance along Clover Avenue located at the southern perimeter of the project boundary. The entrances to the existing gas station on-site along Stevens Creek Boulevard as well as the driveway along Clover Avenue will be eliminated.

Four-levels of above-grade parking will be constructed as part of the project with one access point located at the end of the entrance drive aisle from Clover Avenue. On-site parking will include six handicap parking spaces on street level near the Clover Avenue entrance to the site and 169 spaces within the on-site parking structure. The site plan indicates that the garage access point will provide one inbound lane and one outbound lane.

The driveway on Clover Avenue is shown to be 20 feet wide. According to the City of San Jose municipal code, on-site drive aisles that serve two-way drive aisles should be 26 feet wide and driveway widths

should match the 26 feet wide drive aisles. Therefore, the Clover Avenue driveway should be widened to 26 feet to meet city standards.

On-Site Circulation

On-site vehicular circulation was reviewed for the project in accordance with generally accepted traffic engineering standards. Access to each level of parking will be provided via ramped circulation drive aisles that are accessed via the Clover Avenue entrance. Based on the proposed site plan, on-site vehicular circulation will be efficient with simple rectangular circulation aisles within each parking level.

The City's standard width for two-way drive aisles is 26 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of parking spaces. As shown on the site plan, the drive aisles with adjacent parking on each level measure 26 feet wide and meet the City's standard width.

Truck Access

A delivery area is shown on the site plan between the garage and street level parking access points. The delivery area would be accessed via the entrance drive aisle from Clover Avenue.

Trash enclosures are shown to be located at the end of the entrance drive aisle from Clover Avenue. The drive aisle will require that garbage trucks enter the driveway and back out to Clover Avenue to exit. Garbage trucks also may utilize the on-site delivery area to turn-around for exit if it is not occupied.

The site plan also indicates a passenger loading zone along the project's frontage on Clover Avenue. Per City request, the passenger loading zone will be restricted to passenger drop-off/pick-up only and will not be used for truck loading. In addition, the passenger loading zone must be located such that a minimum 15 feet of red curb is provided at the existing fire hydrant along Clover Avenue or the fire hydrant must be relocated.

Overall, the site plan exhibits adequate site access for motor vehicles and large trucks. The City ultimately will determine the adequacy of the proposed driveways and internal on-site circulation design.

Transit Services

The project site is not directly served by any transit services other than the limited stop 323 VTA bus line that has a stop at the intersection of Santana Row and Stevens Creek Boulevard approximately 900 feet west of the project site. Local bus line 60 operates along Winchester Boulevard. Bus stops for this line in the northbound and southbound directions are located near the Winchester Boulevard/Olin Avenue and Winchester Boulevard/Olsen Drive intersections, respectively. It can be assumed that some guests/employees of the proposed hotel would utilize the existing transit service. Applying an estimated three percent transit mode share, which is probably the highest that could be expected for the project, equates to approximately three new transit riders during the AM peak hour and four during the PM peak hour. Assuming the existing transit service would remain unchanged with line 60 providing service with 15-20-minute headways during the peak commute periods at bus stops along Winchester Boulevard, the estimated number of new transit riders using the bus stops located near the project site would equate to no more than one new rider per bus during the peak hours. VTA operations reports indicate that the 60 bus line as well as several other bus lines in the project area serve less than ideal ridership. Therefore, the new riders due to the proposed project could be accommodated by the current available capacity of the bus service in the study area and improvement of the existing transit service would not be necessary with the project.

Bicycle and Pedestrian Facilities

Currently, there are no existing pedestrian/bike links between the project site and other existing pedestrian/bike and transit facilities in the area. The San Jose Bike Plan 2020 and Envision 2040 General

Plan, as described below, identify planned improvements to the bicycle network within the City and provide policies and goals that are intended to promote and encourage the use of multi-modal travel options and reduce the identified project impacts to the roadway system. The planned improvements to the bicycle network will provide the project site with improved connections to surrounding pedestrian/bike and transit facilities and a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies.

Pedestrian traffic primarily would consist of guest and employees of the proposed hotel development walking to and from surrounding retail establishments, as well as bus stops on Stevens Creek Boulevard and Winchester Boulevard. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. All of the roadways in the vicinity of the project site have sidewalks on both sides of the street.

Public Transit/Pedestrian/Bike Improvements

The proposed project site is located within the Valley Fair/Santana Row Urban Village Boundary and fronts Stevens Creek Boulevard, which has been designated as a Grand Boulevard by the Envision San José 2040 General Plan. Sites within an Urban Village and located along a Grand Boulevard must incorporate additional urban design and architectural elements that will facilitate a building with pedestrian orientated design and activate the pedestrian public right-of-way.

The Envision 2040 General Plan identifies goals and policies that are dedicated to the enhancement of the transportation infrastructure, including public transit and pedestrian/bike facilities. The Transportation Policies contained in the General Plan create incentives for non-auto modes of travel while reducing the use of single-occupant automobile travel as generally described below:

- Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling walking, and transit facilities.
- Give priority to the funding of multimodal projects to provide the most benefit to all users of the transportation system.
- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The planned improvements discussed below are intended to reduce the identified project impacts to the roadway system by providing the project site with viable connections to surrounding pedestrian/bike and transit facilities and provide for a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies. However, the full implementation of the improvements are beyond the means of the proposed project given that they may require right-of-way from adjacent properties. The project could be required to make a fair-share contribution towards the cost of the improvements since the identified improvements would be of benefit to the project.

Bicycle and Pedestrian Facility Improvements

The Envision 2040 General Plan identifies the following goals in regards to bicycling and pedestrians:

- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments.
- Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
- Give priority to pedestrian improvement projects that improve pedestrian safety, improve pedestrian access to and within the Urban Villages and other growth areas.

The San Jose Bike Plan 2020 indicates that a variety of bicycle facilities are planned in the study area, some of which would benefit the project and adhere to the goals of the Envision 2040 General Plan. Of the planned facilities, the following are relevant to the project.

Class II Bike lanes are planned for:

- Monroe Street, between Newhall Street and Tisch Way
- Moorpark Avenue, between Williams Road and College Drive
- Winchester Boulevard, between Moorpark Avenue and Payne Avenue
- Tisch Way, between Winchester Boulevard and Monroe Avenue

Transit Facility Improvements

The Envision 2040 General Plan identifies the following goals in regards to public transit:

- Pursue development of BRT, bus, shuttle, and fixed guideway services on designated streets and connections to major destinations.
- Ensure that roadways designated as Grand Boulevards adequately accommodate transit vehicle circulation and transit stops. Prioritize bus mobility along Stevens Creek Boulevard.

Stevens Creek Boulevard has been designated as a Grand Boulevard within the Envision 2040 General Plan. Grand Boulevards are intended to serve as major transportation corridors with priority given to public transit. Given that the project fronts Stevens Creek Boulevard, the project shall be required to implement the following Grand Boulevard design principles:

- Provide a minimum 15 feet sidewalk width along its frontage on Stevens Creek Boulevard
- Minimize driveway cuts to minimize transit delay
- Provide enhanced shelters for transit services

There is a BRT line planned for the West San Carlos Street/Stevens Creek Boulevard corridor. The BRT will run on Stevens Creek Boulevard. Two BRT infrastructure solutions have been proposed: a single reversible transit-only lane between Winchester and MacArthur; and a dual-lane, transit-only overhead viaduct between Henry and MacArthur. The former option would include a center passing lane through the station loading areas, while the latter would include an aerial station.

The Stevens Creek Boulevard corridor serves as the primary access point to major retail/commercial destinations along Stevens Creek Boulevard and access to the area from the regional freeways of I-280 and I-880 is limited to their interchanges with Stevens Creek Boulevard. The proposed center lane BRT will require the removal of one travel lane in each direction of travel along a segment of Stevens Creek Boulevard between Winchester Boulevard and I-880 that is already congested. The removal of vehicular capacity along the primary travel corridor will result in a significant increase in congestion on the segment. Therefore, it is recommended that future BRT service along Stevens Creek Boulevard between Winchester Boulevard and I-880 be accommodated within the existing travel lanes.

The West San Carlos Street/Stevens Creek Boulevard BRT is in only the preliminary stages of its environmental review and there is no identified schedule for its completion.

Parking

Per the City of San Jose Municipal Code (Chapter 20.90.060) hotel land uses are required to provide one space per hotel room or suite plus one space per employee. Based on the City's parking requirements and an identified 15 hotel employees for the proposed 200-room hotel, the project is required to provide a total of 215 off-street parking spaces. The City of San Jose Urban Village Overlay parking reductions are applicable to the project site since the project site is located within the Valley Fair/Santana Row Urban

Village. The Urban Village Overlay allows for a reduction in the required on-site parking by 20%. The application of the reduction would result in the requirement of 172 on-site parking spaces for the project.

The project proposes to provide a total of 175 on-site parking spaces. Therefore, adequate on-site parking will be provided per City parking requirements.

Bicycle Parking

For hotel land uses, the City's Bicycle Parking requirements require one bicycle parking space plus one space per 10 guest rooms. Based on the City's Bicycle Parking requirements, the proposed project is required to provide 21 bicycle parking spaces to meet the city standards. The site plan indicates that the proposed project will include a bike room on street level adjacent to the garage entrance. The proposed bike room shall include a minimum of 21 bicycle parking spaces.

Effects on Surrounding Residential Streets

The proposed project site fronts the major Stevens Creek Boulevard thoroughfare. As proposed, direct access to the project site would be provided via one access point along Clover Avenue. It is anticipated that the majority of the project traffic would utilize the intersection of Clover Avenue with Stevens Creek Boulevard to access the project site. However, some project traffic could utilize Monroe Street and Hemlock Avenue. For this reason, an evaluation of the effects of project traffic along Clover Avenue and Hemlock Avenue was completed.

Unlike the intersection level of service analysis methodology, which has established impact thresholds, the analyses contained in this section are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Several studies have been made regarding the indirect impacts of traffic on residential neighborhoods. The variables affecting these impacts include traffic volumes, type, or makeup, of traffic (i.e. passenger cars, trucks, motorcycles, emergency vehicles, etc.), traffic speed, perception of through traffic as a percentage of total traffic, adequacy of street alignment (i.e., horizontal and vertical curvature), accident experience, on-street parking, residential dwelling setbacks from the street, pedestrian traffic, and street pavement conditions (which would add to traffic noise as the pavement deteriorates). Other factors that may be a contributor to neighborhood nuisance levels include socio-economic status of the neighborhood, and expectations of the residents regarding traffic volumes; however, these are beyond the purview of CEQA and are provided here for informational purposes only.

Estimated Project Traffic

The effects of project traffic on the each of the streets was evaluated based on field observations, the collection of traffic volume and speed data collected in January 2016, and projections of the additional project generated traffic.

The 24-hour tube counts indicate that the existing traffic volumes along Hemlock Avenue are approximately 940 daily vehicles and along Clover Avenue 620 daily vehicles. It is projected that the project would result in the addition of 417 daily trips to each of the streets. Although the projected average daily trips are within an acceptable range for this type of street, the added project trips constitute a measurable increase from the existing volumes. However, it is important to note that the proposed project is similar to surrounding land uses along both Clover and Hemlock Avenues. In addition, the proposed project traffic is not considered cut-through traffic given that each of the roadways serve as primary access roads to the project site.

Speed surveys also were conducted along Hemlock and Clover Avenues. The posted speed limit along both streets is 25 mph. Based on the collected data, the 85th percentile speed along both streets is within the 25 mph posted speed limits. Therefore, it can be concluded that there is not an obvious speeding issue along the either of the streets, and the posted speed limits are adequate.